urged, but also with respect to new program authorizations which trigger the appropriations process.

Second. Reduce point discounts on FHA and VA home financing through administrative adjustments of rates to more realistic levels. Five and six point discounts—$1,500 on a $25,000 home mortgage—are stifling home financing and wiping out personal savings.

Third. Suspend any further issues of FNMA participation sales other than for VA and FHA pooled housing mortgages. When the participation sales bill was being debated, we warned that this multi-billion-dollar budgetary gimmick would place severe strains on the private credit market and push up interest rates to record levels. Experience with the program has fully confirmed our fears.

Fourth. Enact the Republican-initiated proposal to grant FNMA additional borrowing authority in a prudent and legal manner.

Fifth. Remove FNMA's $15,000 administrative limitation on purchase of mortgages under its secondary market operations.

Sixth. Appoint an emergency Presidential factfinding committee on the homebuilding crisis to report its findings in sufficient time for congressional consideration prior to adjournment of the 89th Congress, and prior to the November election.

Mr. Speaker, the main cause of the stringency in money for loans is the swollen budget of the President and the excessive spending programs advocated by his administration.

All the while some of us in Congress have been urging drastic cuts in nonessential Government spending.

Administration policies caused this money crisis. However, Mr. Speaker, we of the minority stand ready and willing to support sound remedies. Home building and selling is the second largest industry in the country. It is vital to the economy that immediate steps be taken, such as those I have mentioned, to curb inflation and ease money for loans to homeowners.

Trade-With-Enemy Ban Should Not Be Weakened

EXTENSION OF REMARKS
OF
HON. PAUL FINDLEY
OF ILLINOIS
IN THE HOUSE OF REPRESENTATIVES
Friday, July 29, 1966

Mr. FINDLEY. Mr. Speaker, a change in the agriculture appropriation bill adopted by the Senate on July 15 could hamper our war effort because it would weaken economic sanctions against North Vietnam. The change involves the trading-with-the-enemy amendment accepted by the House on April 26 by an overwhelming bipartisan vote of 290 to 98.

Imposed as a limitation on funds for the food-for-peace program—Public Law 480—the House amendment stated:

> No funds appropriated by this Act shall be used to formulate or administer programs for the sale of agricultural commodities pursuant to Titles I and IV of Public Law 480, 83rd Congress, as amended, to any nation which sells or furnishes or which Permits ships or aircraft under its registry to transport to North Vietnam any equipment, materials or commodities, so long as North Vietnam is governed by a Communist regime.

The Senate Appropriations Committee decidedly weakened this provision by the addition of this crippling modification: "unless the President determines that the national interest requires otherwise." The committee in Senate Report 1370, page 55, stated that the House provision as it stood would "encroach upon the authority that the committee believes that the President of the United States should have in the conduct of his responsibilities."

On the contrary, I believe it is more accurate to say that it is the Senate modification—not the original House version—that is an encroachment upon responsibilities. It is the Congress—not the Presidency—which is adversely affected.

The Senate alteration gives the President the discretion to waive the ban when he considers it in the national interest to do so. Congress has acquiesced far too long to Presidential pressure in giving the executive branch a lopsided monopoly in the control and direction of foreign relations.

The discretion the Senate would have the President exercise can easily be used in ways and to achieve ends neither envisioned nor necessarily condoned by Congress at the time the legislation is passed. The Tonkin Gulf resolution of 1964 is but one example of this. While the executive branch does have a broad role in many areas of foreign policy development, Congress has the duty and responsibility, as the representative of the people, to give specific direction to policy. A good example is the subject I bring before you today. The House of Representatives, as the body generally closer to the people and more attuned to their opinions than the Senate, must not hesitate to see that its decisions are respected.

The trading-with-the-enemy curb is not a cruel device to punish the poor and starving peoples of the world. Under it, food donations could continue no matter what commerce the recipient countries maintain with North Vietnam or any other country. This is an important point which must be understood. The amendment as adopted by the House does not apply to donations, it applies only to "concessional sales," that is, sales for "soft currencies" or long-term dollar sales at nominal interest rates. It would deny the advantage of these deals to any country that trades with North Vietnam. As such, it would indeed have an impact, but hardly, a cruel impact.

Indeed, the impact would be merciful. To the extent that it helps to shut off supplies of all kinds to Hanoi it mercifully shortens the conflict and improves the position of our men fighting in that jungle war.

Why should our taxpayers finance special cut rate deals to governments—some of which like Poland are Communist—which send supplies to those who are killing American soldiers in South Vietnam? A Polish ship, I might add, was damaged recently while handling cargo near Haiphong.

The House bill as it stands is clear and unequivocal. The Senate version altering the House bill seriously undermines the whole impact of the amendment by creating a loophole big enough to accommodate a lot of cargo. Let us be clear. Let us give effect to our words. Countries which benefit handsomely from Public Law 480 provisions should be prepared to choose between purchasing our farm surpluses at special terms—more attractive than U.S. firms can get—or trading with a nation with whom we are engaged in a bitter and bloody war. They should not be permitted to have the best of both worlds.

The Senate language lets the President define the national interest. The national interest is, admittedly, a concept that is not without some ambiguity, but we should create a legislative loophole which would permit a subordinate acting in the name of the President but perhaps without his knowledge to set aside a specific and reasonable definition of national interest made by the Congress.

Congress is just as capable of determining the national interest on this point as the President and far more so than some unknown fourth-layer assistant in the Executive Office Building.

A conference has not yet been arranged at which reconciliation of differences between the House and Senate versions will be attempted. It is my understanding that the Senate conferees have been appointed, but House conferees have not.

In insisting resolutely on the House version, House conferees, whoever they may be, will be true not only to their colleagues of both political parties but more importantly to all our armed forces in South Vietnam.

SENATE

MONDAY, AUGUST 1, 1966

The Senate met at 12 o'clock meridian, and was called to order by the Acting President pro tempore (Mr. METCALF).

The Chaplain, Rev. Frederick Brown Harris, D.D., offered the following prayer:

Eternal God, who committest to us the swift and solemn trust of life, since we know not what a day may bring forth, but only that the hour for serving Thee is always present, may we wake to the instant claims of Thy holy will, not waiting for tomorrow, but yielding today. Consecrate with Thy presence the way our feet may go; and the humblest work will shine, and the roughest places be made plain. Lift us above unrighteous anger

and mistrust into faith and hope and love by a simple and steadfast reliance on Thy sure will.

Mastered by that love which seekest not its own, but whose passion is the coming of Thy universal kingdom, may the words of our mouths and the meditation of our hearts be this day, and always, acceptable in Thy sight, O Lord, our strength and our redeemer. Amen.

THE JOURNAL

On request of Mr. MANSFIELD, and by unanimous consent, the reading of the Journal of the proceedings of Friday, July 29, 1966, was dispensed with.

WAIVER OF CALL OF THE CALENDAR

On request of Mr. MANSFIELD, and by unanimous consent, the call of the Legislative Calendar, under rule VIII, was dispensed with.

MESSAGES FROM THE PRESIDENT

Messages in writing from the President of the United States were communicated to the Senate by Mr. Geisler, one of his secretaries.

EXECUTIVE MESSAGES REFERRED

As in executive session,

The ACTING PRESIDENT pro tempore laid before the Senate messages from the President of the United States submitting sundry nominations, which were referred to the appropriate committees.

(For nominations this day received, see the end of Senate proceedings.)

BILLS INTRODUCED

Bills were introduced, read the first time, and, by unanimous consent, the second time, and referred as follows:

By Mr. CARLSON:

S. 3675. A bill to amend title V of the International Claims Settlement Act of 1949 to provide for the determination of the amounts of claims of nationals of the United States against the Chinese Communist regime; to the Committee on Foreign Relations.

By Mr. JACKSON (for himself, Mr. BIBLE, and Mr. KUCHEL) (by request):

S. 3676. A bill to establish the National Park Foundation; to the Committee on Interior and Insular Affairs.

(See the remarks of Mr. JACKSON when he introduced the above bill, which appear under a separate heading.)

By Mr. CARLSON:

S. 3677. A bill to provide for the issuance of a special postage stamp commemorating the centennial of the birth of Laura Ingalls Wilder; to the Committee on Post Office and Civil Service.

By Mr. JAVITS (for himself, Mr. CLARK, Mr. KENNEDY of New York, and Mr. YOUNG of Ohio):

S. 3678. A bill to amend the Social Security Amendments of 1965 so as to eliminate therefrom certain provisions which deny hospital insurance benefits to certain individuals otherwise eligible therefor because of their membership in certain subversive organizations or their prior conviction of crimes involving subversive activities, and for other purposes; to the Committee on Finance.

(See the remarks of Mr. JAVITS when he introduced the above bill, which appear under a separate heading.)

By Mr. HARTKE:

S. 3679. A bill relating to the appointment and promotion of deputy U.S. marshals; to the Committee on Post Office and Civil Service.

(See the remarks of Mr. HARTKE when he introduced the above bill, which appear under a separate heading.)

COMMITTEE MEETINGS DURING SENATE SESSION

On request of Mr. MANSFIELD, and by unanimous consent, the Subcommittee on Constitutional Amendments of the Committee on the Judiciary and the Committee on Labor and Public Welfare were authorized to meet during the session of the Senate today.

ADDRESSES, EDITORIALS, ARTICLES, ETC., PRINTED IN THE RECORD

On request, and by unanimous consent, addresses, editorials, articles, etc., were ordered to be printed in the RECORD, as follows:

By Mr. ROBERTSON:

Newsletter entitled "Washington Report," issued by Senator STENNIS, dated August 1, 1966.

LIMITATION ON STATEMENTS DURING THE TRANSACTION OF ROUTINE MORNING BUSINESS

On request of Mr. MANSFIELD, and by unanimous consent, statements during the transaction of routine morning business were ordered limited to 3 minutes.

ESTABLISHMENT OF NATIONAL PARK FOUNDATION

Mr. JACKSON. Mr. President, at the request of the administration, I introduce, for myself, Mr. BIBLE, and Mr. KUCHEL, a bill to establish the National Park Foundation and ask that it be properly referred.

As explained in the letter of transmittal, the purpose of the bill is to provide ready machinery for private philanthropy which seeks opportunity to contribute effectively to the conservation of the Nation's natural, scenic, historic, scientific, educational, inspirational, and related recreational resources.

The proposal would abolish the National Park Trust Fund Board and replace it with a National Park Foundation.

For the information of the Members of the Senate, I ask unanimous consent that the full text of the letter of transmittal accompanying the draft of the bill be printed in the RECORD following my remarks.

The ACTING PRESIDENT pro tempore. The bill will be received and appropriately referred; and, without objection, the letter will be printed in the RECORD.

The bill (S. 3676) to establish the National Park Foundation, introduced by Mr. JACKSON (for himself, Mr. BIBLE, and Mr. KUCHEL), by request, was received, read twice by its title, and referred to the Committee on Interior and Insular Affairs.

The letter, presented by Mr. JACKSON, is as follows:

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., July 25, 1966.

Hon. HUBERT H. HUMPHREY,
President of the Senate,
Washington, D.C.

DEAR MR. PRESIDENT: Enclosed is a draft of a proposed bill "To establish the National Park Foundation."

We recommend that the bill be referred to the appropriate committee for consideration, and we strongly recommend that it be enacted.

The focus of the bill is upon providing ready machinery for private philanthropy which seeks opportunity to contribute effectively to the conservation of the Nation's natural, scenic, historic, scientific, educational, inspirational, and related recreational resources.

If this Nation is to preserve its great places of beauty and history, if lands sufficient to the needs of our citizens for outdoor recreation are to be set aside, all segments of society—public and private—must join in the common effort. This proposal, which would supplant the Act of July 10, 1935 (49 Stat. 477; 16 U.S.C. 19 *et seq.*), as amended, that established the National Park Trust Fund Board, will help make it possible for private generosity to enhance public programs.

Enactment of the broader authority contained in the proposed bill is particularly timely in view of the commitment of the Administration to the preservation of natural beauty as a precept of President Johnson's Great Society. In the years ahead an informed public will be increasingly concerned with programs whose concern is the preservation of rural landscapes and the urban environment. The bill offers a vehicle for individuals and organizations to help realize a vital objective of the Great Society.

Full participation by private donors has not been realized under the Act of July 10, 1935 (49 Stat. 477; 16 U.S.C. 19 *et seq.*), as amended, which created the National Park Trust Fund Board. In the 27 years of the Trust Fund's existence, only $117,000 has been received. In addition, pursuant to the Act of July 25, 1962 (76 Stat. 217), which provided for the establishment of the Theodore Roosevelt Birthplace and Sagamore Hill National Historic Sites, the National Park Trust Fund Board received a $500,000 fund from the Theodore Roosevelt Association. The Act specified, however, that such funds could be used only for the purposes of these two historic sites.

We propose, therefore, legislation that abolishes the National Park Trust Fund Board and replaces it with a National Park Foundation. The National Park Foundation will be a charitable and nonprofit corporation. It will not be regarded as an instrumentality of the United States, except for the purpose of all tax laws. The income and property received or owned by the Foundation will be exempt from all Federal and State taxation. Our proposal supplements the authority of the Secretary of the Interior, acting under the Act of June 5, 1920 (41 Stat. 917); 16 U.S.C. 6), to accept outright gifts of real property within the various national parks and monuments.

We believe that the establishment of the proposed National Park Foundation, which will have expanded authority with respect to the nature of the property that may be accepted and the use to which it may be put, will create a climate and framework within which the support of private philanthropy can be more readily achieved.

The purpose of the bill is to encourage private gifts of real and personal property or

any income therefrom or other interest therein for the benefit or of in connection with the National Park Service, its activities, or its services, and thereby to further the preservation of natural, scenic, historic, scientific, educational, inspirational, or recreational resources for future generations of Americans, by establishing a National Park Foundation to accept and administer such gifts.

The bill provides for the creation and establishment of the National Park Foundation, which shall consist of a board having no less than eight members, at least six of whom must be private citizens of the United States. The existing National Park Trust Fund Board has a majority of governmental officials, and it is believed that the board of the proposed Foundation will have a wider appeal to prospective donors. The National Park Foundation will be under the chairmanship of the Secretary of the Interior and the Director of the National Park Service will be the additional governmental member. The Secretary of the Interior will coordinate the Foundation's activities with both Federal and local policies, including land-use and development policies. The Foundation will succeed under the terms of the proposal to the rights and interests of the National Park Trust Fund Board, which is abolished by the proposal.

The bill gives the Foundation broader authority than the existing National Park Trust Fund Board to accept and administer gifts, devices, or bequests. First, it is made clear in section 3 that the Foundation may accept such gifts whether by the terms of the gifts they are absolute or in trust. Second, such gifts may be not only of personal property, but also of real property or any income therefrom or interest therein. Third, the bill establishes that an interest in real property may include easements or other rights for the preservation, conservation, protection, or enhancement of property which is a natural, scenic, historic, scientific, educational, inspirational, or recreational resource. The Foundation may therefore accept gifts of development rights in real property for the preservation of green belts and open spaces. Recent State legislation, for example in New York and California, has similarly authorized public agencies to accept such development rights or conservation rights, as they are sometimes called. Finally, the bill makes it clear that the Foundation may accept private donations of property, even though they may be encumbered, restricted, or subject to beneficial interests of private persons if any current or future interest inures to the benefit of the National Park Service, its activities or its services. The bill provides that a donation may not be accepted if it entails any expenditure other than from the resources of the Foundation.

Section 4 generally gives the Foundation broader authority than the existing National Park Trust Fund Board to deal with gifts of property or income thereof, but the Foundation is required to follow the terms of the instrument of donation. The Foundation is not to engage in any business, and unless authorized by the instrument of donation the Foundation must invest in those investments lawful for trust companies in the District of Columbia. The Foundation is also authorized to retain property originally accepted by the Foundation from a donor. This section also permits the Foundation to utilize services and facilities of the Department of the Interior, when such services and facilities are made available by the Department.

In addition, the bill provides the Foundation with the usual powers and obligations of a corporation acting as a trustee, affords the Foundation the necessary power to contract and do other lawful acts appropriate to its purpose, and provides the Board of the Foundation essential authority to adopt bylaws, rules, and regulations necessary for the administration of its functions.

The bill is generally designed to strengthen the existing provisions of law with respect to gifts to the United States for the benefit of or in connection with the National Park Service.

The Bureau of the Budget has advised that there is no objection to the presentation of this proposed legislation from the standpoint of the Administration's program.

Sincerely yours,

STANLEY A. CAIN,
Assistant Secretary of the Interior.

MEDICARE OATH

Mr. JAVITS. Mr. President, Friday's Washington Post tells of a Federal Court decision to enjoin the requirement of a loyalty disclaimer for certain medicare recipients. In the case, the Los Angeles court granted a motion made by the American Civil Liberties Union to restrain the Government from requiring medicare applicants to state whether they belong to certain organizations. The action is part of a test case, initiated by the ACLU challenging the requirement of the Social Security Amendments Act of 1965.

I ask unanimous consent that the text of the Post article be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

UNITED STATES ENJOINED AGAINST USING NON-RED CRITERIA FOR MEDICARE

(By Richard West)

LOS ANGELES, July 28.—A temporary court order was issued here today restraining the Government from requiring medicare applicants to choose between stating whether they belong to Communist-dominated organizations or being investigated.

The action is expected to result in an important national test case, affecting the applications of an estimated 2 million persons not already covered by social security, railroad retirement or other civil service programs.

Seventeen million other persons already covered were not required to fill out the form containing the disputed question.

Chief Judge Thurmond Clarke of the U.S. District Court here granted the injunction shortly after it was requested by A. L. Wirin, chief counsel for the American Civil Liberties Union of Southern California (ACLU).

Three similar suits sponsored by the ACLU are pending in New York, Philadelphia and Washington, D.C., but this is the first case in which an injunction has been granted, Wirin said.

[The Washington suit, brought by Alice Evans, 85, of 1661 Crescent pl., NW., was dismissed as premature by District Court Judge William B. Jones. He said Miss Evans should go through administrative channels at the Department of Health, Education, and Welfare before going into court.]

Wirin filed the suit on behalf of Mrs. Alda T. Reed of Los Angeles and "all other persons similarly situated." He did not further identify Mrs. Reed.

He said the disclaimer question is unconstitutional because it requires the medicare applicant to give up his right to "freedom of speech and association" in return for hospital insurance coverage.

The challenged question on the medicare application, according to the Social Security Administration, reads:

"Are you now a member of any organization which is required to register under the Internal Security Act of 1950 as a Communist-action organization, a Communist-front organization or a Communist-infiltrated organization?"

Wirin said Judge Clarke's order restrains Secretary of Health, Education, and Welfare John Gardner from "in any manner enforcing the provision in the medicare act which bars asserted subversives from getting benefits under the act."

"It also temporarily enjoins the requirement that any applicant for medicare answer the question, restrains use of the form which contains the question and restrains the enforcing act of Congress," Wirin added.

The attorney said the injunction should not result in the need for the printing of new forms, however, because present forms can be used providing the disputed question is crossed out.

Judge Clarke made the injunction effective until a hearing on the matter is held Aug. 3.

He stipulated that the case be heard by a three-judge court, including himself, another federal judge and a judge from the U.S. Court of Appeals.

Wirin said he dropped a similar suit last April when the Social Security Administration stated that Medicare applicants would not have to answer the question.

Later, however, Commissioner of Social Security Robert M. Ball said the oath would continue to appear on the application and that if the applicant refused to answer the question, the Department would conduct an investigation to obtain the information.

Wirin said an estimated 17 million persons already covered are not required to submit to this scrutiny since it is not necessary for them to sign the form.

Mr. JAVITS. Mr. President, on January 17 of this year, I offered, together with my colleagues, Senators KENNEDY of New York, MORSE, CLARK, HARTKE, TYDINGS, and YOUNG of Ohio, a bill to repeal that section of the 1965 act which requires the disclaimer. At that time, I expressed the view that this provision was not intended by the original drafters of the medicare legislation and that such a requirement was burdensome, demeaning, and unjust as applied to the 2 million older Americans it affects.

I had a very close and direct hand in the enactment of the medicare legislation and I think I have a right to some testimony as to what it was intended to cover.

Recently, upon the request of the Senate Finance Committee, the Department of Health, Education, and Welfare expressed their support of my bill, S. 2776, on the condition that it be broadened in certain respects to repeal preexisting sections of the Social Security Act dealing with nonmedical social security benefits.

I ask unanimous consent that the text of the Department's letter be printed in the RECORD.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

DEPARTMENT OF HEALTH,
EDUCATION, AND WELFARE,
June 30, 1966.

Hon. RUSSELL B. LONG,
Chairman, Committee on Finance,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: This letter is in response to your requests of January 18, 1966, reports on S. 2776 and S. 2777, bills to amend the Social Security Amendments of 1965 so as to eliminate the provision which denies hospital insurance benefits to certain individuals because of their membership in certain

subversive organizations and to eliminate other related provisions.

The Social Security Amendments of 1965 contain temporary provisions under which people who are already age 65, or will reach age 65 within the next few years, and who are not eligible for cash benefits under the contributory social security and railroad retirement programs can be paid hospital insurance benefits which are financed from the general fund of the Treasury. Under section 103(b)(1) of these amendments an aged person who would otherwise be eligible for hospital insurance benefits under the temporary provisions cannot receive them if he is a member of an organization required to register under the Internal Security Act of 1950. Both S. 2776 and S. 2777 would repeal section 103(b)(1). S. 2776 would also repeal the provision in the 1965 amendments (section 103(b)(2)) under which noncontributory hospital insurance benefits provided for under the temporary provisions cannot be paid to a person who has been convicted of treason, espionage, or one of certain other specified offenses. S. 2777 would not repeal the latter provision but would repeal the provision in the Social Security Act (section 210(a)(17)) that excludes from coverage under the social security program employment for organizations required to register under the Internal Security Act of 1950.

We believe that the provision denying noncontributory hospital insurance benefits to persons who are members of specified organizations (section 103(b)(1) of the Amendments) is undesirable in principle and should be repealed. We believe that it is not desirable to have a provision of law under which a person's membership in some specified organization—however repugnant that organization might be to Americans generally—will cause him to be denied the benefits of hospital insurance, perhaps with the result that he does not get hospital care when he needs it.

Consistency would seem to require repeal also of section 210(a)(17) of the Social Security Act excluding employment by these organizations from social security coverage, as proposed by S. 2777. This exclusion applies to anyone who is employed by any organization required to register under the Internal Security Act of 1950, regardless of the kind of work he does and whether or not he is a member or a supporter of the organization. It does not apply to even the most active supporter of such an organization if he is not an employee of the organization. The effect of this provision is anomalous: on the one hand, members—including active supporters—of a subversive organization are eligible for both cash benefits and hospital insurance benefits, provided they are not employees of the organization; on the other hand, employees of such an organization who are not members of the organization are not eligible for either cash benefits or hospital insurance benefits based on such employment. If S. 2776 were to be enacted by the Congress, we would suggest that it be amended to provide also for the repeal of section 210(a)(17) of the Social Security Act.

S. 2776 would repeal section 103(b)(2) of the Social Security Amendments of 1965 which prohibits payment of noncontributory hospital insurance benefits to persons who have been convicted of treason, espionage, and certain other specified offenses listed in section 202(u) of the Social Security Act. The existence of this prohibition in the law raises serious problems of policy. Individuals affected by it would normally receive the benefits of hospital insurance only after they had been released from serving whatever sentence was imposed upon them as a result of their conviction—at which time these aged persons in need of health care would presumably have served whatever debt society felt they owed, as indicated under the applicable legislation and the judgment of the court. If this provision is repealed, consistency would seem to require the repeal also of the parallel provision of the Social Security Amendments of 1965 (section 104(b)(2)), which prohibits a persons who has been convicted of one of the specified offenses from enrolling in the supplementary medical insurance plan, and of section 202(u) of the Social Security Act, under which a person convicted of one of the specified offenses may be rendered ineligible for social security cash benefits, and hospital insurance benefits based on eligibility for cash benefits, if the court, as an additional penalty, orders his wages or self-employment earnings deleted for benefit purposes.

For the reasons indicated, we recommend that either S. 2776, or S. 2777, amended as suggested above, be enacted by the Congress.

We are advised by the Bureau of the Budget that there is no objection to the presentation of this report from the standpoint of the Administration's program.

Sincerely,

JOHN W. GARDNER,
Secretary.

Mr. JAVITS. Mr. President, on behalf of myself, and Senators KENNEDY of New York, CLARK, and YOUNG of Ohio, I send to the desk today a new bill, similar to S. 2776, which incorporates the amendments suggested by the Department, and ask that it remain on the desk for 1 week, so that other interested Senators can join in cosponsorship. I also ask, in light of the Department's favorable report, that the Finance Committee schedule early action on the measure.

Mr. President, we are placing the United States in a demeaning position by requiring this kind of loyalty oath from older citizens. We do not ask the the same thing of recipients of all kinds of other domestic aid payments to farmers, the merchant marine, and other segments of our population. It is something that is really burdensome and improper for the United States to do and I hope very much that it will soon be undone. Especially am I buttressed by the favorable report of the Government department concerned.

The ACTING PRESIDENT pro tempore. The bill will be received and appropriately referred; and, without objection, the bill will lie on the desk, as requested by the Senator from New York.

The bill (S. 3678) to amend the Social Security Amendments of 1965 so as to eliminate therefrom certain provisions which deny hospital insurance benefits to certain individuals otherwise eligible therefor because of their membership in certain subversive organizations or their prior conviction of crimes involving subversive activities, and for other purposes, introduced by Mr. JAVITS (for himself and other Senators), was received, read twice by its title, and referred to the Committee on Finance.

APPOINTMENT AND PROMOTION OF DEPUTY U.S. MARSHALS

Mr. HARTKE. Mr. President, on June 15, I introduced S. 3507, which would place all deputy U.S. marshals under the competitive civil service system. The measure also called for the upgrading of the deputies to a civil service pay classification which is commensurate with the job and duties these men discharge.

Since the time of introduction of that measure the Civil Service Commission has placed these deputies in the civil service register, thus making a part of the measure unnecessary. However, an equally important part of the deputies' problem remains yet unsolved—their pay scale, which has always lagged far behind those of other similar law enforcement agencies, on both a local and Federal level. My new bill deals with this problem.

Today, Mr. President, I introduce a revised measure similar to S. 3507, calling for a more comprehensive solution to the problems facing the deputy marshals. My initial remarks concerning the deputy marshals can be found in the CONGRESSIONAL RECORD of June 15 on page 13156.

The ACTING PRESIDENT pro tempore. The bill will be received and appropriately referred.

The bill (S. 3679) relating to the appointment and promotion of deputy U.S. marshals, introduced by Mr. HARTKE, was received, read twice by its title, and referred to the Committee on Post Office and Civil Service.

ADDITIONAL COSPONSORS OF AMENDMENT NO. 638

Mr. KUCHEL. Mr. President, I ask unanimous consent that the name of the distinguished junior Senator from Kansas [Mr. PEARSON] be added as cosponsor to my amendment No. 638 to S. 3164.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

ADDITIONAL COSPONSOR OF BILLS

Mr. CARLSON. Mr. President, I ask unanimous consent that, at its next printing, the name of the Senator from Kansas [Mr. PEARSON] be added as a cosponsor of the bill (S. 3666) to permit the city of Kansas City, Kans., to count expenditures made for recently constructed board of education's library building and board of public utilities building as local noncash grants-in-aid toward the Kansas City, Kans., urban renewal project.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

Mr. CARLSON. Mr. President, I also ask unanimous consent that, at its next printing, the name of the Senator from Kansas [Mr. PEARSON] be added as a cosponsor of the bill (S. 3667) to permit the city of Wichita, Kans., to count expenditures made for its current civic cultural center as local noncash grants-in-aid toward the Wichita urban renewal project.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

REPEAL OF SECTION 7043 OF TITLE 10, UNITED STATES CODE

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the Senate proceed to the consideration of Calendar No. 1388, H.R. 7327.

The ACTING PRESIDENT pro tempore. The bill will be stated by title.

The LEGISLATIVE CLERK. A bill (H.R. 7327) to repeal section 7043 of title 10, United States Code.

The ACTING PRESIDENT pro tempore. Is there objection to the present consideration of the bill?

There being no objection, the Senate proceeded to consider the bill, which had been reported from the Committee on Armed Services, with an amendment, to strike out all after the enacting clause and insert:

That section 7043(b) of title 10, United States Code, is amended by deleting the following, "prescribes, but not more than $13,500 a year." and substituting in lieu thereof the following: "prescribes, but not more than the rate of compensation provided for grade 18 of the general schedule of the Classification Act of 1949, as amended."

The amendment was agreed to.

The amendment was ordered to be engrossed and the bill to be read a third time.

The bill was read the third time and passed.

The title was amended so as to read: "An act to amend a limitation on the salary of the Academic Dean of the Naval Postgraduate School."

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 1423), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

EXPLANATION OF AMENDMENTS

The amendments are intended to provide specifically that the Secretary of the Navy may not prescribe a salary for the academic dean that is higher than the compensation for a civilian employee of the United States in the grade of GS–18.

PURPOSE

This bill would repeal a ceiling of $13,500 a year on the salary of the academic dean of the Naval Postgraduate School at Monterey, Calif., and permit the salary of this dean to be established by the Secretary of the Navy but at a rate not higher than that received by a civilian employee of the United States in the grade of GS–18.

EXPLANATION

Section 7043 of title 10, United States Code, provides for the civilian position of academic dean to the Naval Postgraduate School located at Monterey, Calif. This section authorizes the Secretary of the Navy to prescribe the compensation of the academic dean but it also establishes a maximum compensation of $13,500 a year.

The prescribed salary ceiling is too low to attract a competent dean in the competitive market of today in which academic salaries have been substantially increased over former levels. Because of the difficulty in employing a faculty leader in the position of academic dean as a result of this salary limitation, the Naval Postgraduate School has had to assign the duties of the academic dean to one of the professors as a collateral responsibility.

Section 7044 of title 10, United Staes Code, authorizes the Secretary of the Navy to employ civilian professors at the Naval Postgraduate School but this section does not limit the compensation of the professors. The upper limits of their salaries is established by the Federal Salary Reform Act of 1964, which provides that the head of any executive department who is authorized to prescribe salaries shall not fix compensation in excess of that received by a person in grade 18 of the general schedule of the Classification Act. To avoid a possible construction that a later enactment might supersede this limitation, the committee has expressly provided in the terms of this bill that the salary of the academic dean may not exceed that of a person in grade 18 of the general schedule.

Under the condition that now obtains at the Postgraduate School, professors on the faculty receive compensations higher than that authorized for the academic dean. Civilian faculty members are paid salaries that range between $6,000 for instructors to about $18,000 for professors for a 10-month academic year, with proportionate increases for service longer than 10 months in any one year. To end this anomaly and to attempt to maintain the academic standards of the postgraduate school, the committee considers that an increase in the salary that may be paid the academic dean is justified.

COST

The additional cost that would result from the enactment of this bill is the difference between $13,500 a year and the amount that may be prescribed as the salary of the academic dean. Since the salary prescribed cannot exceed $25,890 a year, the additional cost cannot be more than $12,390.

The committee was informed, however, that the salary to be prescribed for the academic dean is likely to be about $24,000.

WALL STREET JOURNAL CALLS FOR CONGRESSIONAL ACTION ON BASEBALL'S MONOPOLY

Mr. PROXMIRE. Mr. President, the friendliness and understanding of business and how it operates are certainly characteristics of the Wall Street Journal.

This outstanding spokesman of business interests has often been critical of what they regard as overzealous application of the antitrust laws.

But, Mr. President, even the Wall Street Journal recognizes the obsolete ridiculousness of the 1922 Supreme Court ruling that baseball is not a business, not a matter of interstate commerce subject to our antitrust laws.

The Wall Street Journal today points out that the decision last week of the Wisconsin Supreme Court, finding baseball a monopoly, that had done serious economic damage to the economy of Milwaukee in the exodus of the Milwaukee Braves, but also found Wisconsin antitrust law helpless to deal with the abuse, emphasizes—in the words of the Wall Street Journal, "the illogic of the sport's claim to antitrust immunity."

The editorial goes on to say:

The league obviously takes the attitude that its special monopolistic position in no way obligates it to even consider anything like economic damage and social loss to a vacated city while it pursues its own profit and convenience.

Far from cooperating with local businessmen anxious to assume the risk of maintaining a franchise in an abandoned town, the owners in effect decreed that the city will not have a team. Even a legally sanctioned monopoly such as a patent licensee cannot operate so arbitrarily.

The editorial goes on to call for legislation by Congress to "preserve enough competition to prevent abuse, not grant a blanket exemption subject to arrogant use."

Mr. President, I earnestly hope that Congress, through amending the Hart sports bill, which has passed the Senate and is pending in the House, can take this kind of action.

I also hope and frankly expect the State of Wisconsin to have an excellent chance in the U.S. Supreme Court to convince those eminent jurists that baseball in 1966, with a very large share of its revenues coming from all 50 States in television sales, is not the same as baseball in 1922. Such a decision would end this arrogant, ruthless monopoly and give Congress a clear mandate to act promptly.

I ask unanimous consent that the editorial from today's Wall Street Journal, entitled "Baseball's Illogic," be printed at this point in the RECORD.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

BASEBALL'S ILLOGIC

If we were baseball magnates, our glee would be restrained indeed over the National League's latest legal victory. For the Wisconsin Supreme Court's ruling that Milwaukee cannot use state law to stop the Braves from moving to Atlanta nicely emphasizes the illogic of the sport's claim to antitrust immunity.

In 1922 the Supreme Court supplied the bedrock of that immunity by imagining that big-league baseball is not interstate commerce. Now the Wisconsin court says that state antitrust regulation does not apply precisely because baseball is interstate commerce.

Whether the team owners can have it both ways may be resolved by further litigation; Milwaukee can both appeal the most recent ruling and press a yet untried companion suit in Federal court. There seems little doubt, though, that reason exists to check abuse of baseball's privileges.

Without denying that Atlanta rates a big-league franchise, we do find something suspect in the Braves' transfer. The league obviously takes the attitude that its special monopolistic position in no way obligates it to even consider anything like economic damage and social loss to a vacated city while it pursues its own profit and convenience.

Far from cooperating with local businessmen anxious to assume the risk of maintaining a franchise in an abandoned town, the owners in effect decreed that the city will not have a team. Even a legally sanctioned monopoly such as a patent licensee cannot operate so arbitrarily.

More disturbing is the sport's player draft, which, with no thought of consent from the individual concerned, assigns a single team rights to a potential player. The competition for players that used to exist showed that some young men possess talent worth princely sums to profit-minded owners. Yet the draft means that a recruit must take whatever the team offers; or wait till the next draft and hope for more generosity from the next team to get exclusive rights to him.

Professional football, sad to say, is rapidly moving toward similar inequity.

Now, probably professional sports do require special status under antitrust law, including some form of franchise restriction and player draft. The process of litigation seems ill-equipped to define such a status. Despite Congress' past heritance, the best answer would be sensible legislation.

In any case, it should be evident by now that any antitrust privileges for professional sports must somehow preserve enough competition to prevent abuse, not grant a blanket exemption subject to arrogant use.

THE FEDERAL ROLE IN URBAN AFFAIRS

Mr. RIBICOFF. Mr. President, a tide of change is sweeping across this Nation—and the full effects of that tide are now being felt in America's cities. For better or for worse, we are now an urban Nation. And for better or for worse, our Nation's future will be decided in our cities.

Today, 70 percent of all Americans now live in urban areas, and the number grows each year. By 1980, over 55 million more people will be living in urban areas than were living there in 1960. Yet our cities are already decaying faster than they can be rebuilt.

The pattern of the past affords scant hope for the future. Industry and the middle class have left the central cities. Downtown stores are losing business. Traffic jams strangle city streets. And in the growing urban slums, waves of discontent erupt into violence.

Cities came into being because they served the needs of man. They provided employment—centers of trade and communications—places of culture. And they became magnets, drawing millions from rural America to urban areas, seeking the better life. While our total population has spiraled, farm population in the Nation has drastically dropped—from 23 million in 1950 to 13 million in 1964. As one observer put it:

> The American nation was born in the country and has moved to the city.

But now the city's streets are no longer paved with even the illusion of gold. They are far more likely to be covered with potholes and jammed from curb to curb with a mass of stalled traffic. And at the edge of the streets live great masses of the poor, huddled together in squalor—seething with the dissatisfaction that comes from hopelessness and the expectation unfulfilled.

We live in a time of booming prosperity—and it would be nice to assume that everyone shares our affluence. But the fact is that there are millions who do not, and who are very much aware that they are locked in the city slum looking out—awash in an eddy far removed from the mainstream of prosperity. They live in a culture born of poverty, constantly faced with the threat of repeating the same dismal cycle—generation after generation.

Some of the grave consequences of this situation are apparent in the bitterness of riots, looting, and arson.

And ironically, this crisis comes upon us after years of constantly increasing Federal investment in urban America. Our efforts to determine just exactly how much we are spending in urban America proved unsuccessful. Such information cannot be found in the annual Budget of the United States, nor in periodic census reports on State and local government financing. In 1962, Robert Weaver, then Administrator of the Housing and Home Finance Agency, stated that the impact of the various Federal programs that directly or indirectly affected metropolitan development was in the nature of $20 billion annually.

Today, that Federal effort is obviously even higher—but today, despite $2.3 billion in Federal hospital construction aid since 1947, there is still no hospital in Watts. Today 4 million urban families still live in substandard housing. Today sprinklers were added to fire hydrants in the steaming streets of one city only after riots and violence. And today 14,000 infants and adults suffer death, injury, and infection each year due to rat bites.

We have slashed highways through cities—built massive public housing projects—condemned great areas of rundown structures—or created bright new office buildings and apartments for the wealthy—all without thoughtfully relating our efforts to the needs of the people. We have been concrete-conscious—not people-conscious.

We have set a national policy of full employment. We have set a national policy of a decent home for every American. We have undertaken the eradication of poverty—the development of rural areas—the development of adequate transportation. We have all these policies, but the basic fact is this—we have yet to enunciate and carry out a clear-cut national policy of urban development. We have not come to grips with the problems of our cities.

Taken together, these problems deprive Americans of genuine freedom in everyday urban living. They restrict freedom of choice in residence, in environment, in use of time, in equal opportunities for the urban newcomer. They impose high costs. They prevent the achievement of the goals of our Nation.

The violent events of recent weeks in American cities clearly show that we do not have the answers. No individual has the answers. In many cases, we have not even asked the right questions.

It is high time we examined the issues. Grasping the nettle is never a comfortable experience, but grasp it we must. Until we understand the nature and causes of the problems that plague our cities, we cannot come up with constructive solutions. The very foundations of our institutions are threatened—and the time to act is now.

We must begin to answer the questions: Is our response to the present challenge adequate? Are the techniques of our aid programs obsolete and limited—designed to meet the needs and conditions of national life of a generation ago? Are the proper management skills being used? Is the effectiveness of the programs that exist impaired by division of authority among many agencies and levels of government? And, do the goals of major Federal programs conflict? Are they unreconciled in their application to the individual metropolitan area, some working to the revitalization of the central city, some accelerating suburban growth, some encouraging new urban clusters—all making difficult the development of a clear national strategy for city building?

In an effort to ask the right questions—and begin to find answers to help organize our Federal efforts efficiently, constructively and effectively—the Subcommittee on Executive Reorganization will begin hearings on August 16, 1966, on the Federal role in urban affairs. Our first witness will be Secretary Robert C. Weaver of the Department of Housing and Urban Development. Attorney General Nicholas deB. Katzenbach, Office of Economic Opportunity Director Sargent Shriver, Secretary of Labor W. Willard Wirtz, Secretary of Health, Education, and Welfare John W. Gardner, and Secretary of Commerce John T. Connor have also been invited to testify.

The subcommittee plans in later sessions to examine the Federal role from the point of view of others, including mayors of cities and individuals who can be helpful in our understanding of the problems and possible solutions in fields closely affecting our cities and their people.

Mr. JAVITS subsequently said: Mr. President, I was not on the floor, because I was in the Committee on Labor and Public Welfare considering airline strike legislation, when the Senator from Connecticut [Mr. RIBICOFF] made a statement on the Federal role in urban affairs. I am a member of the subcommittee headed by the Senator from Connecticut [Mr. RIBICOFF], and will observe what is done with the greatest of interest.

I hope we shall have from the administration more than generalities about eliminating ghetto conditions, but rather that we will have solid action in which the administration and Congress can join in order to bring about improved intergovernmental cooperation including a better system for financing the improvements of our cities.

MONTHLY REPORT ON FEDERAL PERSONNEL FOR JUNE 1966

Mr. WILLIAMS of Delaware. Mr. President, today the Joint Committee on the Reduction of Nonessential Expenditures issued its monthly report on Federal personnel for June 1966, along with a summary of the year's employment record.

In the month of June, 73,088 additional civilian personel were added to the public payroll. Figuring the Government on a 40-hour workweek this is the equivalent of 3,600 extra employees added to the public payroll for every working day in the month of June. Or computing further, it is the equivalent of 450 per hour or better than 1 every 10 seconds.

The June total of 2,738,248 exceeds the Korean war peak—2,601,000 in July 1952—and is the highest public payroll since June 1946.

During the past fiscal year—July 1965 through June 1966—the administration has added 195,658 additional employees, with 187,506 of these having been added since December 1, 1965, the day when President Johnson promised the American people he would cut civilian employment for the remainder of the fiscal year 1966 by at least 25,000.

This is another example of the Johnson administration giving lipservice to economy while at the same time continuing and expanding its spendthrift policies.

These additional 187,000 employees added since December 1965 will cost the

American taxpayers over $1 billion per year in salaries, and I need refer only to the President's speech of last December as evidence that these additional employees were not necessary.

The President has been expressing concern over our deficit and the resulting inflation; it is time that he stops talking and gives us some action.

Mr. President, I ask unanimous consent to have printed in the RECORD the monthly report on Federal personnel for June 1966.

There being no objection, the report was ordered to be printed in the RECORD, as follows:

STATEMENT BY HON. GEORGE H. MAHON, DEMOCRAT, OF TEXAS, CHAIRMAN, JOINT COMMITTEE ON REDUCTION OF NONESSENTIAL FEDERAL EXPENDITURES, IN RE MONTHLY REPORT ON FEDERAL PERSONNEL AND PAY FOR JUNE 1966, WITH YEAREND SUMMARY

Executive agencies of the Federal Government reported civilian employment in the month of June totaling 2,738,248. This was a net increase of 73,088 as compared with employment reported in the preceding month of May.

Civilian employment reported by the executive agencies of the Federal Government, by months in fiscal year 1966, which began July 1, 1965, follows:

Month	Employment	Increase	Decrease
July 1965	2,542,590	34,471	
August	2,549,985	7,395	
September	2,516,886		33,099
October	2,528,695	11,809	
November	2,547,923	19,228	
December	2,550,742	2,819	
January 1966	2,555,572	4,830	
February	2,580,518	24,946	
March	2,610,780	30,262	
April	2,644,153	33,373	
May	2,665,160	21,007	
June	2,738,248	73,088	

Total federal employment in civilian agencies for the month of June was 1,600,057, an increase of 45,859 as compared with the May total of 1,554,198. Total civilian employment in the military agencies in June was 1,138,191, an increase of 27,229 as compared with 1,110,962 in May.

Civilian agencies reporting the larger increases were Post Office Department with 13,376, Agriculture Department with 9,916, and Interior Department with 5,978. The largest decrease was reported by Treasury Department with 2,494.

In the Department of Defense the larger increases in civilian employment were reported by the Army with 12,027, and the Navy with 9,450.

Total employment inside the United States in June was 2,571,827, an increase of 78,659 as compared with May. Total employment outside the U.S. in June was 166,421, a decrease of 5,571 as compared with May. Industrial employment by federal agencies in June was 592,004, an increase of 17,450 as compared to May.

These figures are from reports certified by the agencies as compiled by the Joint Committee on Reduction of Nonessential Federal Expenditures.

The June increase

The 73,088 increase in June includes general agency expansion in employment, Vietnam war emergency employees in the Defense Department, seasonal personnel traditionally taken on during summer months by such agencies as Interior and Agriculture Departments, and a preliminary estimate of 35,000 extra people employed temporarily throughout federal agencies under the President's so-called Youth Opportunity Back-to-School Drive.

FOREIGN NATIONALS

The total of 2,738,248 civilian employees certified to the Committee by federal agencies in their regular monthly personnel reports includes some foreign nationals employed in U.S. Government activities abroad, but in addition to these there were 128,549 foreign nationals working for U.S. agencies overseas during June who were not counted in the usual personnel reports. The number in May was 128,561.

SUMMARY FOR FISCAL YEAR 1966, ENDED JUNE 30, 1966

For many years the Committee, in its statement accompanying the monthly personnel report for June—the last month of the fiscal year—has summarized the changes in federal civilian employment during the year ending. Following this practice, changes during fiscal year 1966 are summarized below:

There was a net increase of 230,129 in civilian employment by executive branch agencies of the Federal Government during fiscal year 1966 which ended June 30, 1966. The total at the end of the year was 2,738,248 as compared with 2,508,119 in June 1965.

Inside and outside the United States

There was an increase of 218,023 in employment within the United States by federal executive agencies, and an increase of 12,106 in employment outside the United States. Employment inside the United States as of June 30, 1966, totaled 2,571,827 as compared with 2,353,804 a year ago. Employment outside the United States as of June 30, 1966 totaled 166,421 as compared with 154,315 a year ago.

Civilian and military agencies

There was a net increase during the year of 125,734 in employment by civilian agencies of the government, and an increase of 104,395 in civilian employment by military agencies. Employment by civilian agencies at the year-end totaled 1,600,057 as compared with 1,474,323 a year ago. Civilian employment by military agencies totaled 1,138,191 as compared with 1,033,796 in June 1965.

Fiscal year 1966 increase

The major increases for the fiscal year—besides 104,395 for the Department of Defense—were reported by Post Office Department with 79,911, Department of HEW with 12,696, Agriculture Department with 5,558, Interior Department with 4,247, Veterans Administration with 3,169, Treasury Department with 2,600, State Department with 1,962, General Services Administration with 1,648, Office of Economic Opportunity with 1,645, National Aeronautics and Space with 1,645, Selective Service with 1,459, and Tennessee Valley Authority with 1,146.

CHANGES IN FEDERAL EMPLOYMENT AS OF THE END OF FISCAL YEARS 1954–66

Federal civilian employment changes, fiscal years 1954–1966, in the executive agencies of the Federal Government—showing defense agencies, civilian agencies, and total—follow:

Fiscal yearend (as of June 30)	Department of Defense	Civilian agencies (except Defense)	Total
1954	−123,100	−32,400	−155,500
1955	−11,366	+1,613	−9,753
1956	−17,677	+17,812	+135
1957	−18,926	+35,817	+16,891
1958	−63,838	+29,628	−34,210
1959	−18,940	+18,827	−113
1960	−31,006	+46,689	+15,683
1961	−4,725	+41,155	+36,430
1962	+27,111	+50,280	+77,391
1963	−19,582	+32,795	+13,213
1964	−20,183	−7,943	−28,126
1965	+3,955	+22,582	+26,537
1966	+104,395	+125,734	+230,129

Mr. BYRD of Virginia. Mr. President, I wish to associate myself with the remarks made by the distinguished Senator from Delaware [Mr. WILLIAMS]. The report to which the Senator refers, which was issued by the Joint Committee on the Reduction of Nonessential Expenditures, shows that for the month of June 1966, as compared with July 1965, there has been an increase in Federal employment of roughly 196,000 persons. The increase for the month of June 1966, was 73,088, which represents nearly a 3-percent increase in the Federal employment figures over the preceding month of May.

I subscribe to the view that this is a matter with which the President should concern himself in fairness to both the American taxpayers and the many splendid Federal employees who will be disadvantaged if the Federal employment figures continue to soar and increase at the rate they have during the month of June.

Mr. WILLIAMS of Delaware. Mr. President, I thank the Senator from Virginia [Mr. BYRD] for his comments.

It should be pointed out that this report was first initiated by the distinguished former senior Senator from Virginia [Mr. Harry Byrd], the father of the gentleman who has just spoken. During the years it has served as a useful barometer of Federal employment.

I am hopeful that this month's report will alert the American people to the reckless manner in which the administration is unnecessarily expanding its public payroll.

UPSIDE DOWN

Mr. YOUNG of Ohio. Mr. President, very definitely if there is to be peace in Vietnam by negotiation, President Johnson should announce our intention to take three important steps toward that goal.

He should proclaim a pause, or cessation of U.S. bombing of North Vietnam for a period of 15 to 30 days, certainly sufficient time to impress on the rulers of Hanoi that our intent is to achieve an armistice and ceasefire in Vietnam and directly following that with the withdrawal of our Armed Forces to the coastal areas in South Vietnam and in due time to the United States. In addition, we should propose a scaling down of offensive military activities in South Vietnam for a period of 15 to 30 days leading to a ceasefire on both sides provided, of course, that the Vietcong scale down and end offensive and terrorist attacks on our Armed Forces during such period and in all areas of South Vietnam, withhold hostile action. Then, above everything else, we should proclaim that we Americans are definitely willing to discuss a ceasefire and an armistice with delegates representing the National Liberation Front or Vietcong. In other words, despite the yapping of Prime Minister Ky and his flamboyant statements as if he were directing the policies of our Government in southeast Asia, we must proclaim a willingness to negotiate with delegates representing those who are doing the actual fighting in South Vietnam. This would mean representatives of the Vietcong as delegates independent of

Saigon and Hanoi. In addition there would be independent delegates representing the Hanoi government and an equal number of independent delegates representing the Saigon government together with an equal number of our own representatives.

Then, of course, our leaders from the President on down would do well to muzzle the militarist talk of the Joint Chiefs of Staff and our generals. They do too much talking on political and foreign policy matters. Silence on political subjects is in order for them. Officials at the Pentagon, including all of our generals, would do well to bear in mind at all times that the Founding Fathers, in writing our Constitution, provided that civilian authority must always be supreme over military authority.

Mr. President, in trying to bring about an armistice and peace and end our involvement in this miserable civil war in the jungles of Vietnam which is really of no strategic or economic importance to the defense of the United States, we would also do well to encourage U Thant, Secretary General of the United Nations to continue leadership in his usual impartial manner to try to bring about peace.

Unless this is accomplished the future probably holds forth for us involvement with our Armed Forces in Vietnam for 5, 10, or 20 years. This is the prospect before us. Another possibility, if not probability, due to our complete air superiority and continuing heavy bombing from the air including the destruction and killings by napalm bombing, coupled with our tremendous firepower and the presence of nearly 400,000 of the finest soldiers the world has ever seen—the cream of the crop of fine American boys—is that the Vietcong will suddenly go underground and return as peasants to their farms or go to Saigon and our bases in South Vietnam seeking jobs and piasters from the U.S. forces and civilian agencies including the CIA.

The PRESIDING OFFICER (Mr. BYRD of Virginia in the chair). The time of the Senator has expired.

Mr. YOUNG of Ohio. Mr. President, I ask unanimous consent that I may proceed for 2 additional minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. YOUNG of Ohio. With 400,000 or more GI's involved and months going by without any fighting, of course, the natural reaction in our country would be to bring the boys home. Then, who knows what will occur over there 5 or 10 years hence? In the Progressive magazine of August 1966, two thoughtful and concise statements were published on our involvement in the civil war in Vietnam bracketed on page 4 of that great publication. I refer to the items captioned "Upside Down," by James Reston, associate editor of the New York Times, and "Sledgehammers and Hornets," by Eric Sevareid, highly respected commentator of CBS. I commend these articles to my colleagues, and ask unanimous consent that they be printed in the RECORD at this point as part of my remarks.

There being no objection, the articles were ordered to be printed in the RECORD, as follows:

[From Progressive magazine, August 1966]

UPSIDE DOWN

With the bombing of targets on the outskirts of Hanoi and Haiphong, it [the Johnson Administration] has now done almost everything it said or indicated it would not do except bomb China, and the end of this melancholy chapter in American history is not yet.

The Johnson Administration said it was not seeking a military solution to the war, and it is now obviously seeking precisely that. It said it was there merely to help a legitimate government defend itself, and it has ended up by replacing a military clique that is not a government, not legitimate, and is not really defending itself.

JAMES RESTON.

THE NEW YORK TIMES, *July 1, 1966.*

SLEDGEHAMMERS AND HORNETS

We are not really conquering territory in Vietnam. Our official statement is that at the end of last year eight and a half per cent of the total land area was considered secure; at the end of February nine and a half per cent; all the rest is in enemy hands or disputed and unsafe, or empty. About eight million people, a bit over half the population, are in secure allied controlled areas.

We are using giant sledgehammers to kill hornets. The Vietcong's National Liberation Front in the South has an annual budget estimated at about ten million dollars. Our annual costs in this war run to about fifteen billion. The enemy needs an estimated eighty-seven tons of supplies each day; the American establishment alone needs about twenty thousand tons a day.

In terms of last year's total expenditure for the war, each enemy soldier killed last year cost us well over a million dollars.

ERIC SEVAREID.

CBS, *June 11, 1966.*

THE STRIKE AGAINST THE AIRLINES

Mr. LAUSCHE. Mr. President, the bill now pending before the Committee on Labor and Public Welfare, intending to deal with the airline strike, has not yet come to the floor of the Senate.

Reading reports from the newspapers, I observed that the two proposals being considered do not contain any provision to insure an end to the dispute.

The bill which has been discussed primarily contemplates giving the President power to declare three successive 60-day periods, allowing the disputants to negotiate. However, at the end of 180 days, if the dispute is not settled, the matter comes back to Congress.

It is in this latter point that I believe the bill is weak.

Mr. President, when the bill reaches the Senate, I contemplate offering an amendment which will, at the end of the unsuccessful negotiating period, give power to the President to appoint an arbitration board vested with full powers to investigate and hear witnesses, and render a judgment on what the settlement should be.

I repeat, under the proposal which has been discussed there is no terminal point. In effect, the proposal provides for negotiation for 180 days, and if a settlement is not reached, the matter comes back to Congress.

My amendment would direct the President at the end of the unsuccessful negotiations, to appoint an arbitration board vested with full powers to render a final judgment, the judgment not to be appealable except that an appeal would lie in ascertaining whether the procedure outlined by Congress had been followed.

BUSINESS ECONOMISTS SAY THAT TAX HIKE COULD BRING ON RECESSION

Mr. PROXMIRE. Mr. President—

In the second half of 1966, the American economy is more likely to suffer from some insufficiency of demand than from an excess.

These are the words with which Oscar Gass opens a statement on the economy published recently by Ralph E. Samuel & Co., a New York brokerage firm. They could not be more to the point.

In his carefully reasoned discussion of the present state of the American economy, Mr. Gass argues persuasively that our economy can continue to expand at the healthy rate it has experienced since 1961.

But it will not continue its expansion—an expansion that has meant a significantly higher standard of living for the average American—if a misdirected public policy results in further economic restraints, particularly in the form of tax increases.

He notes the economic slowdown of the second quarter of this year and comments:

The slowing down of April through June is not of decisive importance. What is important is that public policy shall not be misdirected toward endeavoring to make this slowing down continue or gather momentum.

By the end of this year, Mr. Gass predicts, the distinctive fiscal question will be "how best to share—between more public expenditures and further tax decreases—a potential year's accrual from growth of over $10 billion of additional Federal revenues."

This growth will occur if we will allow the economy enough freedom. One policy we must reexamine very soon is the rather stringent monetary restraints in effect right now, as I have advocated in recent statements.

Mr. Gass presents evidence to back up his argument that the economy can continue to grow at a relatively rapid rate. With an annual growth of about 2 percent in our labor force, and an increase in productivity equal to the average over the past several years, a 5½ percent annual growth of the economy is possible.

He goes on to discuss the economic effects of business investment, military spending, consumer demand, wholesale and consumer price trends, export and import levels and Government policy, including the wage-price guidelines.

His succinct analysis puts another well known economist on record as favoring policies that will allow the economy to expand as rapidly as possible without bringing on a general inflation, which, he says, has not occurred in the past year. The price experience of the United States

in 1965–66 reflects particular scarcities—not a general excess of demand, he says.

In numerous statements, Mr. President, I have tried to make many of the same points Mr. Gass makes so well. I fully share his basic belief that our economy can continue to grow, without inflation.

We must make certain we do not cause our second quarter slowdown to deepen. The stakes are too large to allow this sort of mistake.

Mr. President, I hope my colleagues will take the time to read Mr. Gass' careful discussion of the forces at work in our economy. It is undoubtedly one of the best statements on this subject I have read anywhere. I ask unanimous consent that it be printed in the RECORD so that they may do so.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

THE ECONOMY AT MIDYEAR

(By Oscar Gass)

In the second half of 1966, the American economy is more likely to suffer from some insufficiency of demand than from an excess.

At the beginning of July, the United States continues to advance in the longest economic expansion of its industrial history, excepting only the expansion which included World War II. Gross National Product has attained the range of $730 billion—about $9,500 for each person employed. A deliberate, capable national Political Economy over this growth.

Yet even now, apart from seasonal influences, the United States is more than one million jobs away from what would be called *full* employment in any other advanced country. In April through June, the advance of the economy has been slowed distinctly. Unemployment among young people, not yet securely established in work, has consequently increased sharply. Fortunately, in the first half of 1966, the White House rejected pressures to restrain the growth of economic activity still further, through a general tax increase.

The slowing-down of April through June is not of decisive importance. What *is* important is that public policy shall not be misdirected toward endeavoring to make this slowing-down continue or gather momentum.

Also in November and December 1966, during the planning for the next fiscal year, it is unlikely that measure to *restrain* the economy will constitute the correct focus of public policy. On the contrary, it is probable that attention will be due rather to how to *stimulate* the economy and prolong its advance. The distinctive fiscal question would then be how best to share—between more public expenditures and further tax decreases—a potential year's accrual from growth of over $10 billion of additional federal revenues.

GROWTH POTENTIAL

It is a great error, though one widely entertained, that the United States has now come within sight of the unavoidable end of a unique economic expansion—an expansion supposedly fed to unrepeatable size on the resources (of labor and plant capacity) made idle by the 1960–61 recession. On the contrary, the balance of evidence suggests that real Gross National Product can continue to rise, at least through 1970, at a rate not greatly different from the average of 5½% per annum sustained from the beginning of 1961 to mid-1966.

The labor force needed to support an annual real expansion of 5½% in Gross National Product will be available in 1966–70. Since the beginning of 1961, U.S. employment (civil and military) has increased at an annual average rate of about 2%. But, in the next four years, it will also be possible to increase total employment by about 2% annually. Indeed, due to the high birth level of the years immediately after World War II, the flood of new entrants into the labor force may permit a rise in employment of 2% per year *without reducing the 3.9% unemployment rate of the first half of 1966.*

For the yearly difference between 2% more workers and something like 5½% more total output, it will be reasonable to look to the experienced growth of man-hour productivity. In the whole postwar period, 1947–65, the average yearly productivity increase in the whole private economy was about 3.3%. But in 1960–65 the annual gain averaged 3.6%. And in manufacturing alone, during 1960–65, the annual gain averaged about 4%.

We must not exclude from consideration the possibility that—given present high investment levels—the productivity gain per worker, during 1966–70, may even prove in excess of 3½% per year. Then the potential increase in annual output will be correspondingly above 5½%.

GROWTH POLICY

In both the Kennedy and Johnson administrations, the White House has consistently leaned to the side of underestimating the growth potential of the economy.

Until 1965, the President's Council of Economic Advisers operated with a 3½% per year rise in potential. Then, growing bold, these White House counselors adjusted their estimate of the annual gain in potential upward—to 3¾%. A year later (on May 10, 1966), a member of the Council, Mr. Arthur M. Okun, took another quarter-step. "The potential growth of this economy is about 4 percent a year", he said, "that is the growth of output we can maintain. . . ."

The Chairman of President Johnson's Council, Mr. Gardner Ackley, has specifically espoused the view that the 1961–65 growth rate is unsustainable. "The growth of real output", he has said, "cannot forever be as fast as we have had during the past several years . . . At some point, the economy will really be operating at the ceiling set by labor-force growth and the advance of productivity."

Quite. But, so much larger are the present maturing age groups than those of 1961–65, so substantial also is the pool of workers still unemployed or on short-time, that the annual percentage growth in *employment* need not be less in 1966–70 than it was in 1961–65. Moreover, productivity is being enhanced by the high current rate of business investment and by the better education of the young people now joining the labor force. For them distinctly, a reduction of economic growth to 3¾% or 4% per annum would mean a sustained increase in unemployment.

Both the Kennedy and Johnson administrations have been intrigued by St. Paul's image of the uncertain trumpet. "If the trumpet give an uncertain sound, who shall prepare himself to the battle?" But, in matters relating to the growth potential of the U.S. economy, the uncertain trumpet has sounded from the White House.

INVESTMENT BOOM?

Continuing expansion of business investment in plant and equipment will be the largest factor in sustaining the advance of the economy in the second half of 1966.

Nevertheless, business managements are *not* planning for a *growth* in expenditures on plant and equipment as large as was actually achieved during the same period of 1965. From the second quarter of 1965 to its fourth quarter, these expenditures rose by an annual rate of $5 billion. This year, investment plans call for a rise of only about $4 billion.

Total expenditure in the U.S. during 1966 on all private fixed investment—including housing—will apparently be in the range of $107 billion. The share of fixed investment in Gross National Product will then be only marginally higher than the 14.4% of 1965. This share will continue to be greatly lower than in most other progressive countries.

Still, a considerable body of informed opinion holds that the 1966 level of U.S. investment is dangerously high. In industry particularly, it is said, 1966 investment will add 8% to capacity; this, it is argued, is an "unsustainable" rate of growth. But this argument of unsustainability has limited force. Its 8% measure is doubtful. Its reasoning does not come to grips with economic obsolescence, competitive displacement, and even—what is unavoidable in a market economy—the occurrence of some misdirected investment. The failure of average rates of industrial capacity utilization to fall below 90%, even while 4% of the labor force is unemployed, also indicates that excess investment is surely not yet upon us.

More serious is the challenge from the side of social priorities. Housing particularly has suffered from high interest rates and the competitive preempting of capital funds by industry. In real terms, U.S. house building this year will be at the lowest level since the 1960–61 recession.

MILITARY REQUIREMENTS

It is not anticipated that, in the second half of 1966, military demand will provide a stimulus to the expansion of production on a scale comparable to the past year.

From June 1965 through May 1966, the armed services grew by 404,000, and the civilian employment of the Department of Defense related to military affairs grew by 136,000. At the end of May 1966, there were 3,057,000 persons in the armed services and 1,111,000 civilians in related Defense Department employment. However, for thirteen months later, June 1967, the Department of Defense has scheduled only an establishment of 3,093,000 military and 1,067,000 civilians. No doubt, personnel numbers will be raised. There is, however, no current reason for believing that the past year's addition to manpower will be equalled.

Similarly, from mid-1965 to mid-1966, Department of Defense military expenditures, including military assistance, have risen from an annual level of $48 billion to the range of $58 billion. (The rate of $61 billion was achieved already in March-April.) But, for the fiscal year which began on July 1, 1966, these expenditures are now also budgeted at $58.3 billion. The Department of Defense has indeed stated that it will spend more in the first half of the fiscal year and less in the second half. Also, the Defense Department and the Budget Bureau have let it be known that, if the war in Vietnam lasts beyond mid-1967, there will be need for a modest supplemental appropriation—to cover long-delivery items required in the second half of that calendar year. Very possibly, what the Defense Department regards as modest would be judged substantial by others. But nothing in current prospect gives ground to anticipate a further rise in military expenditure comparable to the $10 billion of the past year.

The American military establishment now employs 5¼% of the nation's labor force and consumes 8% of the Gross National Product. There is no reason to expect these shares to be increased, in a major way, in the near future.

CONSUMER UNCERTAINTIES

If only because of uncertainties regarding the future level of personal expenditures, all precise forecasts of the national product, even for so short a period forward as six months, must be regarded with skepticism.

On recent trends, real consumption will perhaps average about 4½% higher in 1966 than in 1965, and consumer prices about 2½% higher. Then personal consumption

expenditures, which were $429 billion in 1965, would be in the range of $460 billion for the calendar year 1966.

However, no precision should be attached to this $460 billion total. In April-June 1966, consumers' purchases of durables dropped to an annual rate about $3½ billion below the level of January-March. No such drop had been foreseen. And no one knows whether the tepid reception of this year's autos will continue, or whether the 1967 models will resume where 1965 left off. Yet an error of so little as 1% in a six-months forecast of consumption may easily result (through changed sales, inventories and production) in an error of $7 billion in estimating the annual rate of Gross National Product.

This year, no substantial part of the increase in real consumption will accrue to the ordinary wage earner who was working also last year. The average manufacturing worker, for example, earned $112.05 a week in June 1966. But, even if he has a dependent wife and two children, his payroll deduction for social security is now $1.35 a week higher than a year ago. After adjusting for higher prices, he has a little *less*, for his own spending, than he had a year earlier.

INTERNATIONAL MARKETS

It is unlikely that a deficiency of domestic demand, in the second half of 1966, will be of major assistance in expanding exports.

The relatively slack domestic markets for consumers' durables, in April–June, did not help exports: export markets were not waiting for American models of durable consumers' goods. Unfortunately, the accumulated foreign demand for U.S. products is concentrated in just those areas of machinery, instruments and non-automotive transportation equipment for which domestic requirements also are highest and delivery times most extended.

Since 1958, U.S. exports have had to make their way against exclusion from the increasingly preferential tariff status held by members in the two European low-tariff unions (EEC and EFTA). These two are weighty: in 1965, they accounted for 47% of all imports into non-Communist countries. Despite this obstacle, U.S. exports (excluding military aid) rose sharply—from $16¼ billion in 1958 to $26¼ billion in 1965 and to perhaps $29 billion in 1966.

This export expansion was made possible by the success of the U.S.—more than any other advanced country—in keeping its prices from rising. By the measure of value in purchasing commodities, the dollar has strengthened against every other major currency.

But the world finds distinctively advantageous the purchase from the U.S. of machinery, equipment and instruments, embodying advanced technology. The U.S. is now exporting about a billion dollars each month of such merchandise. More could be exported if supplies of *these* things could be enlarged. However, little of export value will be accomplished by creating slack in most sectors of the American economy.

PRICE TRENDS

The price experience of the United States in 1965–66 reflects particular scarcities—not a general excess of demand.

Perhaps most advertised was the 4.4% rise in wholesale prices, from January 1965 to February 1966. However, 65% of this rise was accounted for by a particular shortage, in farm and food products, while an additional 6% reflected a special situation in nonferrous metals (especially foreign-mined copper). All other wholesale prices—72.65% of the total—increased by only 1.3%.

Even among farm products, the prices of crops remained stable while livestock prices jumped 28%. This is not the price behavior characteristic of a general inflation. Moreover, the livestock and meat shortage is being overcome. In the first week of July 1966, wholesale prices of meat are below July 1965. August deliveries of the meat from which bacon is cut are also priced about 10% lower than July, and February 1967 deliveries are priced about 30% lower.

Since February, wholesale prices have been rising very slowly—at a rate below 1% a year. Even among industrial products in heavy demand, there is no sign of cumulative acceleration. While the February wholesale index was 4.2% above February 1965, it is possible that the December index will only be about half as much above December 1965.

One can not be equally hopeful about consumers' prices. There, the sustained rise in the cost of services—a direct reflection of higher wages, salaries and professional incomes—must be expected to continue. Still, it may be speculated that, due to the better food position, the cost-of-living will rise less from May to December this year than the 1.3% increase in the same months of 1965. If so, this year again, very probably, the U.S. rise in the cost-of-living will be least among all advanced countries.

FISCAL AND MONETARY CONTROL

The primary restraining factor in the economy continues to be collection of more taxes—not restriction in the supply of credit or capital.

At midyear, Gross National Product is running, in current dollars, about 8% above a year earlier. The supply of credit and capital funds is running more than correspondingly higher. At the end of June, commercial bank credit was 8.4% ($24 billion) above a year earlier. In January–April 1966, corporate securities issues were 57% ($2.45 billion) greater than a year earlier.

Since the Federal Reserve rediscount rate was increased in December 1965, the price of borrowed money has risen more than any other important price in the economy. Costs have been correspondingly inflated. But only in residential building has the higher cost of money had a visible effect in decreasing the demand for labor, materials and facilities.

The strongest measure of restraint added to the economy in 1966 is the higher level of federal payroll taxes: these will apparently yield, in the calendar year 1966, an increment of about 30%—$7½ billion—above 1965 collections of $25 billion. Next in importance as restraints are higher accruals and accelerated collections of federal individual and corporate income taxes: these will yield a 1966 increment in the range of 12%—$10 billion—over 1965 accruals of $82 billion.

In January, the federal Treasury estimated that the fiscal year ending June 30, 1967 would produce a trifling cash surplus of a half-billion dollars. But experience now suggests that consolidated receipts are likely to run perhaps $6 billion higher. Even after some increase in expenditure, the federal cash surplus would be substantial.

GUIDELINES

Economic guide lines are put forward in situations that involve conflict and uncertainty. They are appeals to public morality and good citizenship. Inevitably, they lack the precision of law and fall short of its authority.

Still, it may be doubted whether a society gains by dividing economic conduct, without residue, into two distinct areas—one governed by law and the other a free run for individual and corporate willfulness. Self-government is wider than law. Worker and enterprise, trade union and trade association, occupants of a common environment, wielders of social power—are all these obligated only by law or contract?

Judge Learned Hand once wrote an eloquent defense of the right of the individual to arrange his affairs so as to minimize tax liability. "Everybody does so, rich or poor; and all do right, for nobody owes any public duty to pay more than the law demands: taxes are enforced exactions, not voluntary contributions. To demand more in the name of morals is mere cant." Yet, even after the great judge's eloquence, it may still be doubted whether he has spoken the right word for spheres of economic conduct where law is less developed than in taxation. Tax conduct is not the model of all social behavior.

In any case, it does not seem fitting that spokesmen for great monopolistic corporations (or their trade union counterparts) should dress themselves in the costumes of those who have the right to set prices, without public intervention or influence, on grounds of free competition. A spokesman for aluminum or steel or automobiles is not a lone onion seller, who takes his crop to a market in which he does not know what price he will get—but determined to get as good a price as he can. Our great manufacturing firms (and their trade union counterparts), to whom guide lines are suggested, have power. And whoever has power has responsibility.

(NOTE.—Oscar Gass is a Consulting Economist, with offices in Washington, D.C., who has rendered a great variety of consultant services, both to private business firms and government entities, during the past two decades.

SCHOOL MILK PROGRAM NEEDS ADEQUATE FUNDING AS MILK PRICES GO UP

Mr. PROXMIRE. Mr. President, last week I pointed to the increase in milk prices around the country as a reason for insuring an adequate Federal contribution to the special milk program for schoolchildren. As milk prices go up, the part of the cost of the school milk program borne by the local school district or, as in most cases, by the child, will also go up. This is why it is important to insure that Federal funds are sufficient to rescind the 10-percent cutback in Federal contributions to the program that took place in fiscal 1966. We must at least attempt to maintain the status quo so far as the Federal contribution is concerned.

On Friday, the New York Times published an article indicating that milk prices were going to go up a cent a quart in New York City today and would probably go up another cent by November 1. This would amount to a whopping 4 cents a half gallon. Unfortunately the Times tends to place the blame on the dairy farmers—who actually are giving up farming in unprecedented numbers because they are not making a decent return on their investment. Even efficient Wisconsin dairy farmers net an average of less than $1 an hour despite incredibly long working hours and a very large capital investment.

The Times quotes milk distributors as laying "the impending price increase to an increase in Government fixed payments to farmers for milk delivered in tank trucks." I deeply hope that the Department of Agriculture will investigate the recent price increase to see who is benefiting from the increase as Senator MCGOVERN has been urging. I think the facts will show that the middlemen, including milk distributors, are getting more of the increase than the farmer.

In any event, it is essential that the school milk program be fully funded in this period of high milk prices. This is why I hope the House-Senate conferees will meet in the near future on the Agriculture Appropriations bill. It is why I hope they will approve the Senate passed figure of $105 million for the school milk program. Finally, it is why I intend to press for additional funds for the program in a supplemental bill if the facts show that $105 million is not enough to fully fund the Federal share of the program.

Mr. President, I ask unanimous consent to have the article from the New York Times printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

[From the New York Times, July 29, 1966]

MILK PRICE RISES A CENT ON MONDAY—INCREASE AFFECTS CITY AND NEW JERSEY DEALERS—GOVERNMENT BLAMED

(By Richard Reeves)

The price of a quart of milk in New York and New Jersey will go up a cent on Monday and will probably go up another cent by Nov. 1.

The increase, which is to be announced Monday by metropolitan area dealers, will raise the usual price paid by consumers in New York stores to 28 cents a quart. The price in northern New Jersey stores will be 26 cents a quart and home delivery prices in both states will be 3 to 5 cents a quart higher than the store prices.

The new prices are about 3 cents a quart higher than milk prices at the end of June and follow recent increases in the prices of bread, butter and eggs.

City Markets Commissioner Samuel J. Kearing yesterday reported these price rises in those commodities: bread, up 2 cents a loaf last Monday; butter, up 10 cents a pound in the last month; eggs, up 16 cents a dozen in the last month.

Milk distributors yesterday laid the impending price increase to an increase in Government fixed payments to farmers for milk delivered in tank trucks. The New York-New Jersey Milk Marketing Administration, a division of the Federal Department of Agriculture, has ordered distributors in the two states to pay farmers $5.77 per hundred pounds of milk in August, compared to $5.50 in July and $5.20 in June.

The increase amounts to almost 1 cent a quart, and spokesmen for several of the city's 400 distributors said the increase would be passed along to retailers.

"The retailers will certainly pass the increase along to the consumers," said a spokesman for Sealtest Foods, one of the largest distributors. "Milk prices are in a vicious circle that is spiraling upward."

JERSEY BOUND BY MINIMUM

New York retailers are free to sell milk at any price, but New Jersey retailers are bound by minimum prices set by the state Office of Milk Industry. The office announced yesterday that northern New Jersey minimums would be raised Monday from 25 to 26 cents a quart for milk purchased in stores and from 28 to 29 cents for delivered milk.

A spokesman for the New York-New Jersey Marketing Administration said the farmers' price for milk had been raised by orders of Secretary of Agriculture Orville L. Freeman "because of the decline in milk production caused by a rather precipitous drop in the number of cows and dairy farmers."

The administration spokesman and dairy officials agreed that the price of a quart of milk was likely to increase at least another cent because of normal seasonal production declines before Nov. 1.

The marketing administration is the agency that, in effect, subsidizes dairy farmers by regulating the price that distributors must pay for milk the farmers produce.

FREE TO FIX OWN PRICES

The distributors and retailers in New York, however, are free to sell milk at any price they feel is competitive. In New Jersey, the Office of Milk Industry sets minimum prices, which are one-half cent per quart higher in southern New Jersey than in the northern part of the state.

The increase in the prices of other basic commodities was revealed in a survey conducted in the city by Commissioner Kearing.

The Commissioner reported that major bakers in the city raised the price of a loaf of bread from 28 to 30 cents last Monday and blamed the increase on higher costs because of a national drop in wheat production. The price of a loaf of bread in the city jumped from 27 to 28 cents last November.

The Commissioner said that wholesale butter prices in the New York area have increased 23 per cent since he took office last Jan. 1. He said a survey by his staff indicated that butter is presently selling for 81 to 87 cents a pound, compared to a range of 71 to 79 cents only two weeks ago.

The price of a dozen large, white, Grade A eggs was 50 to 53 cents on July 1, he said, and is now 67 to 69 cents.

City Council President Frank D. O'Connor and three councilmen—John J. Santucci, Matthew Troy and Aileen Ryan—introduced a council resolution yesterday calling for an investigation of rising food prices in the city.

AIR POLLUTION

Mr. MUSKIE. Mr. President, the August issue of Redbook magazine contains an excellent article entitled "There's Something in the Air" on the critical air pollution problem confronting this Nation. In keeping with Redbook's earlier hard-hitting coverage of this subject the author, Lucy Kavaler, has well summarized the progress made in the fight against contamination of our air environment and has pointed out some of the serious deficiencies in that effort.

Because the Senate just this month unanimously approved expansion of the Federal effort to control air pollution, I feel my colleagues should have the benefit of this excellent article. I ask unanimous consent that the full text of this article be printed in the RECORD at this point.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

(By Lucy Kavaler)

On a foggy day last February, residents of Whiting, Indiana, stepped out of their houses to find their community sadly altered, as if in a bad dream. The paint was stripped from the walls of some of the houses; others had turned an unwholesome rusty-orange. Streets and sidewalks were covered with a repellent greenish film. The town was gripped neither by nightmare nor by magic. Its strange plight was caused by a combination of air pollution and fog that had set off a variety of chemical reactions.

During a five-day period of smog in London in 1952, conductors got off their buses and walked in front, guiding the drivers—to the amusement of passengers. But the smog was not at all funny; at week's end 4,000 people were dead. The greatest number of victims were among the aged, but the death rate for infants too was twice as high as usual. In Donora, Pennsylvania, during four days of air pollution in 1948, nearly 6,000 people, about a third of the total population, were sickened and 20 of them died, along with ten pet dogs, three cats and two canaries.

Can such disasters take place again? "It could happen tomorrow," declares Senator EDMUND S. MUSKIE, of Maine, sponsor of the federal Clean Air Act. "If we had just the right kind of meteorological conditions, the present pollutants in the air could become lethal. Every day in our big cities we are taking a calculated risk of disaster."

While you sit quietly reading this article, you are breathing at a rate of 14 to 18 times a minute. Each time, you are inhaling air that contains many things you never learned about in school when studying the composition of the atmosphere. Each breath carries some 40,000 particles of dust if you are surrounded by "clean" country air, some 70,000 if you live in the city. Then come the noxious gases. The burning of coal for heat and power sends 48,000 tons of sulfur dioxide into the air every day. The nation's 88 million motor vehicles daily release 250,000 tons of carbon monoxide, 16,500 to 33,000 tons of hydrocarbons and 4,000 to 12,000 of nitrogen oxides. To this must be added a host of other fumes, aldehydes, acids, ammonia, lead and other metallic oxides—byproducts of the metallurgical, chemical, petroleum and other industries.

Stir this unwholesome mixture well and it makes the air we have around us on a normal day. To turn this into a disaster situation requires only a windless day and a weather condition known scientifically as a thermal inversion, which means simply that the air is warm where it should be cold and vice versa. Warm air usually rises from near the ground to the cooler areas higher up. As it climbs it carries pollutants with it, and at least a portion of them are scattered into the upper air. Should the upper air become warm, however, it acts as a cover, and the cold, polluted air near the ground does not rise. This is what happened in London and in Donora.

Though the effects of pollution are seldom as devastating as during a disaster, they surround us every day. Look up at the gray sky where there should be sunshine. It is not really a cloudy day; high above the layer of smoke the sun is bright and the sky is blue. Dust the window sills in a city apartment and come back an hour or two later and they will be covered with soot. Leave the car out overnight and a fine layer of dust will dull its finish. The clothes hanging on the line are often gray by the time you take them down, no matter how carefully you washed them. Glance out the windows at the columns of smoke rising from nearby power plants, factories or apartment-house incinerators.

And this is just the pollution you can see. The unseen pollutants—the colorless, sometimes odorless gases—are worse by far. The clear cold air of winter is merely an illusion; pollution often reaches its highest levels when fuel is burned to heat our homes and industrial production is in full swing.

There is no place to hide from these menaces. The United States Public Health Service reports that any community that has a population of 50,000 or more has a real problem. Not only Los Angeles, New York and Chicago, but also Denver, Phoenix and Las Vegas are among the more than 300 cities engulfed in major air pollution. And those countless Americans who moved to the suburbs for a cleaner, healthier life are only slightly better off than their city friends.

"The effects of air pollution," says Vernon G. MacKenzie, chief of the Division of Air Pollution of the U.S. Department of Health, Education and Welfare, "are directly experi-

enced by the more than half of our population living in our great, widespread urban-suburban complexes."

Even Americans in rural areas are not free of the pall, with winds carrying pollutants in some cases for hundreds of miles. The farmer breathes in fumes from the stacks of industries located in cities he cannot see. What he does see are the streaks on the leaves of his corn plants, the pinpoint flecks on his grapes, tobacco, cucumbers, spinach, radishes, parsley and watermelons—all the result of pollution. A single day of smog in California a few years back destroyed an entire lettuce crop. And on the Eastern seaboard pollution ruins at least $18 million worth of crops each year.

Animals suffer too. In the state of Washington a herd of cattle was virtually wiped out by fumes from aluminum-processing plants. In England there was once a lovely, light-colored moth that hovered about the oak trees around Birmingham. Its color blended with the bark of the trees, so the birds, a natural enemy, could not see it. Gradually, as the bark of the trees grew darker with incrustations of soot blown from the industrial city, the moth's life was endangered. In an incredibly swift demonstration of the process of evolution, the moth's color began to change. Within a hundred years it became totally black, and again safely invisible.

Today, with bitter humor, young David J. Friedland, a New Jersey state assemblyman, urges that the chimney swallow replace the Eastern goldfinch as the state bird. "It has become apparent that the goldfinch is simply not equipped emotionally or physically to cope with the rising rate of industrial air pollution."

And if the goldfinch cannot cope, can we? "As we have followed daily deaths in New York City over the past three years it has become apparent to us that there are periodically days with unexpected high mortality asssociated with unusual environmental conditions, which frequently include high levels of air pollution." This is the disquieting conclusion of Drs. James McCarroll and William Bradley, of Cornell University Medical College.

During the month of November in 1962, deaths averaged 250 a day in New York City. On November 30th the amount of sulfur dioxide in the air rose markedly as a result of low winds and a temperature inversion, and on December 1st the death rate climbed to 296. Nor were the additional deaths limited to the very old or to those people in the last extremities of illness.

During this period, most New Yorkers were unaware that the air was worse than usual—the usual, to be sure, being quite bad enough. The effects of this "normal" air pollution are, in fact, far harder to evaluate. "Medical studies are disturbingly inexact, because the conditions of air pollution are never constant. They change minute by minute, day by day, season by season," explains Dr. Leonard Greenburg, professor of preventive medicine at Albert Einstein College of Medicine.

"We may *never* be able to prove a direct cause-and-effect relationship between air pollution and diseases," Thomas F. Williams, chief information officer of the U.S. Division of Air Pollution, points out. But although the evidence remains circumstantial, a health panel at the government's most recent conference on air pollution found it "overwhelming."

Consider just a few examples of this evidence. Telephone operators in Pittsburgh missed more days of work than their colleagues in Philadelphia until an air pollution control program was inaugurated in Pittsburgh. Then the situation reversed itself. Chronic bronchitis strikes three times as many British postmen delivering mail to heavily polluted parts of England as it does those in cleaner regions. More deaths from chronic pulmonary disease occur among residents of the most polluted sections of Buffalo, New York, than among people living in other parts of the city. That bane of our existence, the common cold, is most frequent among those who make their homes in dusty and polluted areas.

Many Americans have never heard of pulmonary emphysema, but Social Security workers making out monthly checks for the disabled know it well. Emphysema, a disease in which the air sacs of the lungs become too stretched to function properly, is now second only to arteriosclerotic heart disease as a disabling illness. In our parents' day, emphysema produced 0.2 deaths per 100,000 of our population. By 1950 the death rate had reached 1.4 per 100,000, and by the end of the decade was pushing toward 8 and still going up. In recent tests, patients were moved into rooms where the air was filtered and clean; their condition improved within 24 hours.

Cancer-producing substances have been identified in city air, and lung cancer is twice as common in cities as elsewhere. "Just because cigarette smoking has been found to cause lung cancer does not mean that we can eliminate other possible causes—such as air pollution," says Mr. Williams.

Researchers at the University of Southern California have exposed mice, weakened from a bout with influenza, to ozonized gasoline, and the mice developed lung cancer. Specialists at New York's Sloan-Kettering Institute concentrated certain chemicals found in a sample of Detroit air and applied them to the skin of female mice; cancers developed there.

Undoubtedly other interpretations of all this data can be made. But "air pollution comes under suspicion," says a committee of United Nations World Health Organization experts, "because of the differences between urban and rural incidences of lung cancer in circumstances when other known factors are not responsible." And George R. Williams, chief of the respiratory disease program of the National Tuberculosis Association, declares: "The entire weight of medical and scientific evidence in this country is that air pollution is a major factor causing chronic respiratory disease." Such disease is the most rapidly rising cause of death in the United States.

But what about those of us who are in good health? Most people, after all, do not suffer from asthma, bronchitis, cancer or emphysema. For us, too, the evidence mounts that today's normal levels of air pollution are harmful. Perhaps we can even blame that tired feeling on the atmosphere. It has been found that rats running on a treadmill slow up considerably when ozone, a vary common pollutant, is introduced into the air around them. And the "turnpike fatigue" so familiar to drivers may very well be due as much to carbon monoxide fumes as to boring scenery and long hours at the wheel.

Other subtle health reactions are now revealed in the first comprehensive study ever made of normal families facing average air pollution levels. Dr. McCarroll and his Cornell associates found that on days when an air pollution monitoring center on Manhattan's Lower East Side reported a high sulfur dioxide level, residents of the area complained first of eye irritation and then of coughs. When dust particles in the air were particularly numerous, it was the cough that plagued them most.

But physical discomfort and illness are not the only dangers of air pollution. On the New Jersey Turnpike not long ago a motorist, driving through the heavy smoke wafted from nearby industrial plants, dimly perceived that the car in front of him was dangerously close and slammed his brakes on suddenly. In the accident that followed, a whole line of cars piled up one on top of another.

When it comes to air travel, the situation is nearly as hazardous. "Near collisions between aircraft have increased because of smoke pollution, to a point where you have had a dull trip if you don't experience at least one on every sequence as a scheduled airline pilot," Captain O. M. Cockes complained to the Air Line Pilots Association recently. "Obstruction to vision" because of smoke, haze and dust has been given as a cause of fatal plane accidents many times. To avoid more accidents, planes are grounded or rerouted to other airports on occasions when fog alone, without air pollution, would not have required it. As air travelers most of us have had the frustrating experience of sitting for hours in airports, waiting for the ceiling to lift, or landing at cities far from our destination because the airport on our scheduled route was completely closed in.

It is often said that air pollution, like water pollution, is the price that must be paid for industrial prosperity, but this view utterly overlooks the fantastic cost of dirty air. No hurricane, tornado, fire, flood or volcanic eruption could destroy more property. Seven years ago Redbook's article "Filth in the Air" (by Ruth and Edward Brecher, April 1959) reported the shocking fact that the annual cost of pollution had reached $7.5 billion. Today a figure that low looks like an impossible goal. The cost calculated by government officials now stands at a staggering $11 billion a year—and many privately consider this figure far too conservative. This is the price of the crop losses and the incredibly rapid deterioration of buildings, bridges and machines.

In Chicago a few years ago, office girls went out to lunch one day and returned with their nylon stockings a mass of runs. It soon became apparent that each girl was not just the victim of bad luck. Sulfuric acid in the air turned out to be the true cause. Damage to shoes and handbags is not quite so quick to appear; nonetheless, leather too is weakened by sulfur dioxide fumes and becomes brittle. Even iron, steel and concrete cannot stand firm against air pollutants. In one industrial town sheets of galvanized iron endure for a mere three to six years, less than half their lifespan in cleaner cities. Metals are corroded, stone is eaten away, glass is etched and rubber cracks.

The costs of pollution are borne not only by businessmen and farmers but by each of us. Your house, indoors and out, must be painted more frequently, upholstery and draperies cleaned and replaced. One recent study indicates that a family of four living in a dirty city must spend several hundred dollars a year more than those in cleaner areas. And this does not count the increased labor of the housewife who must launder, dust, polish silver and copper and scrub blinds and floors far more often than her mother had to.

"In the old days, only the poorest people lived on the wrong side of the railroad tracks, where they had to endure the soot and smoke from passing trains. Today we all are living on the wrong side of the tracks," says Robert A. Low, chairman of New York Special City Council Committee on Air Pollution.

Must we remain on the wrong side of the tracks? Is dirt an inevitable part of city living? Must we continue to risk our own health and that of our children?

Experts on air pollution agree that this is not the case. "It undoubtedly is no longer possible to make the air of New York, Chicago and Detroit like that of a mountaintop," says pollution control chief Vernon MacKenzie realistically, "but it doesn't have to be anywhere near as dirty as it is."

The federal government is now a leading actor in the drama of air pollution control. Its entrance onto the scene is surprisingly recent, with the first program—a very modest one—established in 1955. As recently as

1959, Redbook's study of the problem revealed that the government was spending only $4 million a year on air pollution control. It was not until the passage of the Clean Air Act of 1963 that a broad program of research, control and assistance to states and communities was set up. An appropriation of $25 million was authorized for 1965, $30 million for 1966 and $35 million for 1967, and President Lyndon B. Johnson has since called upon Congress to increase funds by an additional $7 million. Cities and states can receive federal funds when they expand their controls, and spending on the local level has increased 50 per cent as a result. Nonetheless, as Mr. MacKenzie pointed out in a recent speech, only 26 states now operate pollution control programs. Certainly there is no question that even with federal support, air pollution control costs money. What is surprising is how little it costs.

"Should the air be made clean enough to cut down on just one washing a year on each car, the amount saved would more than equal the cost of all the control programs put together," declares Mr. MacKenzie. "If you add in all necessary expenditures to clean our air—by individuals, industries, local, state and federal governments—the total would amount to three dollars a year per person."

The cost most obvious to the individual is the amount spent by his own local government. This is ridiculously low. In Los Angeles, which has the biggest program in the nation, the per-person cost is a mere 51 cents. The average figure throughout the United States for local activities is 22 cents. Until the passage of recent legislation, which may require additional expenditures, highly polluted New York City allotted a niggardly 16 cents, and Detroit and Milwaukee are not much better with 16.5 cents and 17 cents respectively.

Under the terms of the Clean Air Act, the federal government has enforcement powers, particularly when residents of one state are troubled by pollution from another. Still, most of the responsibility for controlling air quality is left up to the states and cities. Many of them take this responsibility far too casually.

In New York City a task force of experts headed by Norman Cousins, editor of the *Saturday Review*, studied the problem intensively, and were distressed to find that the city's own incinerators were among the very worst offenders. "The city has had split vision in terms of enforcement," says Mr. Cousins. "The owner of a small apartment house with an antiquated furnace is fined, while the city is doing nothing about its own violations! That is ludicrous. The only fair thing is for all stacks to be monitored and fines levied according to the intensity and duration of the pollution released."

Burning of coal as fuel is a chief source of air pollution. Laws prohibiting the use of soft coal were passed in England 700 years ago, and were so stringently enforced for decades thereafter that a coal merchant was tortured and hanged in 1306 for violating them. Hard coal and good grades of fuel oil emit far less harmful sulfur dioxide, and natural gas comes close to being a clean fuel. Nonetheless, in many of our cities soft coal and low-grade fuel oil are still being burned both to heat homes and to generate electricity. In New York City during 1964, 3 million tons of coal with high sulfur content were burned, most of it by the Consolidated Edison Company. And far from being tortured or hanged, Consolidated Edison was fined $500 for the emission of dense smoke. It was not until May of this year that legislation requiring the utility company to install effective soot-control devices was adopted by the City Council, along with regulations restricting use of high-sulfur fuels throughout the city. Only two years after similar rulings were passed in Pittsburgh, control officials reported that the air was 67 per cent clearer.

"Still, such improvement is deceptive," Mr. Cousins points out. "All fuel releases some sulfur, and as the population grows and the number of smokestacks increases, the amount of sulfur in the air will increase too. Sooner or later we will be back where we started, unless we improve furnaces and develop inexpensive devices to catch dust and sulfur fumes."

Many experts today advocate nuclear power plants, because atomic energy does not release pollutants. Others worry that one problem, air pollution, would only be replaced by another, disposal of radioactive wastes. And although radiation-releasing accidents are highly unlikely, the possibility cannot be completely ignored.

The most drastic immediate approach is supported by the 50,000 members of the Izaak Walton League. "We think everyone is on the wrong track—shifting from one kind of fuel to another or to radioactivity. *No* pollution—or aerial garbage—should be allowed into the air at all," says Leticia Kent, head of their Clean Air Committee. "Instead, air pollution control devices should be required on all industrial and home installations."

Every year more than 133 million tons of this "garbage" flies into the air over our country, and the figure mounts inexorably. The League's contention that virtually all pollution *can* be stopped is conceded even by some industry executives who do not believe that such total control is necessary.

"I can think of no instance in our chemical manufacturing process where we don't have the know-how to control pollution. Theoretically the air can be cleaned up to any degree, but costs skyrocket, and so we must strike a balance," declares Myron V. Anthony, director of accident and pollution control for the Stauffer Chemical Company, pointing out that the chemical industry has been using control devices for better than 30 years. "There is little benefit, however, in cleaning air to a point far beyond what is needed to protect health and property—and particularly in the case of smaller firms, going out of business to do it."

All major industries agree that the real question is how much of each pollutant can be tolerated. They say the answer to this waits for further research.

"Additional study is needed, of course," says Senator MUSKIE. "But this fact is too often used as an excuse for delay."

Industry is struggling manfully to overcome its image as source of all pollution, and points to expenditures of about $700 million a year to install, maintain and develop controls. Yet the image is not altogether false. Industry accounts for about 30 per cent of pollution, according to U.S. Public Health Service estimates. It is outranked only by motor vehicles, which are held responsible for more than half of the dirt and fumes in the air.

The automotive manufacturers, taking action at long last, are finding it hard to live down their past. S. Smith Griswold, seasoned by 11 years of struggle as director of the Los Angeles Air Pollution Control District and now chief pollution-control enforcement officer for the federal government, insists that "everything that can be done today to control auto exhaust was possible ten years ago." And yet car buyers who were being offered power brakes, power steering, push-button window openers and air conditioners as high-priced extras were not even told about pollution control devices for crankcases and exhaust pipes.

California, one of the first states to become aware of the automobile's major contribution to smog, led the country in passing laws requiring crankcase devices in 1962 model cars and exhaust controls on 1966 models. Manufacturers put the former on 1963 model cars throughout the nation, but it has taken the passage of the federal Clean Air Act Amendments of 1965 to get the exhaust-control device on new cars beginning with the 1968 models. The cost will be passed on to consumers, who will have to pay between $18 and $45 more for their new cars.

Control of used cars is still left to the states, and since it would cost an owner about $40 to have his old car equipped with a control device, law-making bodies regard the issue as a political "hot potato." Yet appliance manufacturers insist that until such devices are made mandatory by law, it is financially unsound to invest in their production. As a result, even if you *want* a control mechanism on your old car, you can't buy one. One possible solution to this chicken-and-egg dispute has been suggested by New York's Special City Council Committee: offer tax benefits to the owners of cars which have been fitted with pollution controls.

Even with control mechanisms on new cars, it is necessary to keep on running just to keep from losing ground. "The devices take care of only about two thirds of the pollution produced by cars," explains Vernon MacKenzie. "This is enough to give us an improvement in our air until about 1980. By then the increase in the number of cars will cancel out any reduction. Still, we have this time to invent better devices."

Although motor vehicles, industry and home heating produce most aerial garbage, some real garbage also ends up in the air. About half of all our garbage is burned each year, much of it in ancient incinerators that should themselves be on the trash heap. In some cities this is just what has happened to them.

"On a single day in 1958 we knocked out fifty-eight million dollars' worth of incinerators in Los Angeles," recalls Mr. Griswold. "This not only relieved pollution but also reduced the incidence of fires by nearly a third." Garbage now is collected and hauled 40 miles away or used as land fill. The Dodger baseball stadium stands on one such site, and 36-hole golf courses have been laid out on other in Alhambra and Burbank.

The very vastness of the air around us dilutes our individual sense of responsibility. "Yet we pollute the air as individuals; therefore control rests with the individual," asserts the New York State Action for Clean Air Committee.

After all, one of those smog-producing cars is almost certainly yours. You did not design it or refine the fuel it burns, but you can cut down on exhaust fumes by keeping it in good repair. If trash and leaves are still burned in your community—the practice is being outlawed in one city after another—you might work out another method of disposal with your neighbors.

"Each homeowner can also see to it that in his own home, the furnace functions properly," urges Mr. MacKenzie. "It is to his advantage, because a faulty furnace not only pollutes the air but also throws fuel away."

In some areas, dirty, high-sulfur fuels are being legislated out of use, but in others the choice is left up to the individual. When you buy a new home or improve an old one, you might consider heating with such relatively clean fuels as hard coal, natural gas or electricity.

Most important, all of us must overcome any feeling of helplessness about our ability to change conditions. Government officials actually beg us to act. If you see a plume of dirty smoke rising from a stack, complain; if the incinerator of a nearby apartment house, office building or hospital is dirtying the clothes on your line, complain; if a foul smell emanates from a factory, complain.

To whom? Complain first to the source of the pollution, then to your mayor or town council. If action is not swift, get neighbors

to join in your complaint and notify the state health department. If your state has no air pollution program (those that do not are listed at the end of this article), protest to your governor and state legislators. Urge your senators and representatives in Washington to help initiate local and state programs, or to expand existing ones, taking advantage of available federal funds.

"Women should form volunteer crusades to improve the air," Senator MUSKIE pleads.

In New York City such a crusade was started by just one worried mother. Three years ago Hazel Henderson's little girl started nursery school. "This gave me three hours a day of my own. I decided to use them to do something about the terrible air."

Mrs. Henderson wrote to city officials, to government agencies, to radio and television executives. Her first triumph came when the major radio and television commentators began daily to announce the air pollution index, bringing the problem to the attention of a large and previously uninformed audience. Then City Councilman Robert A. Low, sponsoring bitterly opposed air pollution legislation, responded to another of her letters by inviting her to join other irate citizens at a meeting in his office. It was on that day in the fall of 1964 that the Citizens for Clean Air was established.

Mrs. Henderson was alone when she started, but within a year 700 people were lined up behind her. The CCA has sent speakers to parent-teacher associations and civic groups, has testified before legislative committees, held a rally on Wall Street, set up a mobile air-monitoring unit for a week at Rockefeller Center. Its work contributed heavily to the passage last May by the City Council of what has been called the toughest air pollution law in the nation.

With only a $2-per-person membership dues to support it, the group finds it hard to respond to requests for advice pouring in from citizens' committees springing up all over the country. Most such requests are sent on to Washington, where the Public Health Service has assigned a special representative to handle them and provide publications and free films. But it is worth reporting widely Mrs. Henderson's advice to a Michigan group which wrote in despair that local industry was opposing all its efforts.

"Get to the wives of the executives," returned Mrs. Henderson. "They will understand the risk to their children and grandchildren. Let members of the committee chip in to buy a stock share of an offending corporation. Then sit in on the annual meeting and ask what 'our' company is doing about pollution. And it might be a good idea to suggest that the local newspaper reporter go along too."

One of the most effective of the citizens' organizations is the "SOS" (for "Stamp Out Smog"), founded in the late 1950s by a handful of Los Angeles housewives who were weary of enduring the heavy, unpleasant air characteristic of their city. The women armed themselves with facts, interviewed plant managers and appeared at public hearings, sometimes wearing gas masks. And gradually other homemakers, mothers and career women joined them. Garden clubs, property owners' associations, labor unions and business groups pledged their support. In time public officials discovered that they had to reckon with the tremendous voting strength of the SOS.

"Today you cannot see a plume of smoke in Los Angeles," says Mr. Griswold, recalling that while he was in charge of the city's pollution control, 40,000 offenders were brought to court and practically all were convicted. Only "clean" industries using control devices are now permitted to locate in the area; "dirty" ones have been forced to clean up.

Credit for arousing the strong public opinion that made this possible is freely given by Mr. Griswold to the women of Los Angeles. He cites this example of effective citizen action. A California oil company was convicted on charges of polluting the air. The penalty, a fine of $500, was a trifle to a corporation counting its profits in millions. The fine would have been forgotten in an hour, except for one thing. The following morning 1,500 gasoline credit cards were mailed back to the company.

"With this kind of support," asks Mr. Griswold, "how can we fail?"

If you would like to help in the fight against air pollution, write for information to Department RB, Clean Air, Washington, D.C. 20201. States that have no air pollution control laws are Alabama, Iowa, Kansas, Maine, Mississippi, Montana, Nebraska, New Hampshire, New Mexico, North Dakota, Rhode Island South Dakota, Vermont and Wyoming. States that have control laws but no enforcement powers on the state level are Arizona, Connecticut, Georgia, Nevada, North Carolina, Ohio, Oklahoma, Tennessee, Utah and Washington.

HOW TO MEET THE PROBLEM OF WORLD HUNGER

Mr. GRUENING. Mr. President, in the Washington Cathedral on Sunday, July 31, Canon Michael Hamilton preached a sermon entitled "Food and People."

It was devoted to the subject which former President Eisenhower in a letter to me as chairman of the Subcommittee on Foreign Aid Expenditures of the Senate Government Operations Committee, called "one of the most, if not the most, of the critical problems facing mankind today" and a subject on which President Johnson has spoken vigorously no fewer than 22 times since his state of the Union message of January 1965.

I ask unanimous consent that Canon Hamilton's sermon, "Food and People," be printed at this point in my remarks.

There being no objection, the sermon was ordered to be printed in the RECORD, as follows:

FOOD AND PEOPLE

(Sermon preached by Canon Michael Hamilton at Washington Cathedral, July 31, 1966)

The Gospel according to St. Matthew, Chapter 25, Verses 42 to 45: "For I was an hungered, and ye gave me no meat: I was thirsty, and ye gave me no drink: I was a stranger, and ye took me not in: Naked, and ye clothed me not: sick, and in prison, and ye visited me not. Then shall they also answer him, saying, Lord, when saw we thee an hungered, or athirst, or a stranger, or naked, or sick, or in prison, and did not minister unto thee? Then shall he answer them, saying, Verily I say unto you, Inasmuch as ye did it not to one of the least of these, ye did it not to me."

Statement of Senator ERNEST GRUENING of Alaska, when as chairman of the Senate Government Operations Subcommittee on Foreign Aid Expenditures on S. 1676 and related bills opened hearings on June 22, 1965. "Today two-thirds of the 3.16 billion people in the world are hungry. The world's population growth rate exceeds 2% per year. If this growth rate persists, we can look ahead 35 years, just to the turn of the century, and know that the world population will double."

Senator GRUENING'S comment that the world's population will double by the turn of the century is a correct prediction based on current population trends. From the time of Christ until 1850 the total population of the world remained under one billion. It is now over three billion, it will be over six billion by the year 2000, and it will double every thirty years thereafter! There is less food available to each person in the world today than there was in 1930, and the situation is getting worse not better. We owe men like Senator GRUENING a great debt for his vision and courage in bringing to public attention the terrible agony that is coming upon the world. In his straightforward matter of fact manner, Senator GRUENING saw behind the cold demographic statistics to the human suffering they represented. He and his staff drew up a bill which is now in its final Committee Hearing stages. It is a modest bill, asking chiefly for changes in government organization so that some designated people be responsible for worrying and being informed about problems of world population. Many of his colleagues warned the Senator that his sponsoring of this bill would be political suicide, it was going to be most unpopular with powerful religious interests, and that, as a bearer of bad news, he would be resisted. These critics did not deter the Senator, and he continued his leadership. By singling out Senator GRUENING I mean to pay him tribute because he has been primarily responsible for bringing the issue to the arena of Congressional discussion. President Johnson had already taken important and most helpful Executive action, and of course, in the private sphere individuals like Margaret Sanger, and such agencies as Planned Parenthood, Population Reference Bureau and the Population Council have been working hard and long on the problem.

However, in spite of efforts, the hard truth that we all must face is that we do not yet have a realistic plan to deal with overpopulation in the world, much less a sufficient concern and will to implement a plan if it were available. Before I give some of the facts to illustrate what I am talking about, let me refer back to the other text. "Then shall he answer them, saying, Verily I say unto you, Inasmuch as ye did it not to one of the least of these, ye did it not to me." If a Christian needs no other reason, that passage should be sufficient justification for examining and preaching about human welfare. The social, biological, demographic, agricultural, educational and political conditions which enable people to live and thrive, or starve and die, these are religious concerns. This text means that someone who commits his life in service to Christ, must do so by looking after his neighbor. And whosoever neglects the needs of his neighbor so that he starves, it is as if he were letting Christ himself suffer and die.

The statistics that I will be given come mainly from U.S. Government publications, and they are styled as conservative and likely to be under-estimates. In our own continent of abundance the United States is most fortunate because it has become the bread basket of the world. We are living in one of the few regions which export rather than import wheat and rice. By the year 2000 our present population will have increased 58%, and we will probably have sufficient food for them. However, our living conditions may well be intolerable, for we will be very, very overcrowded.

Housing is likely to be in short supply, and most of us will be living in high rise apartments hardly distinguishable from ant heaps. There is every indication that we will have insufficient schools, major transportation problems and serious pollution of air, water and land.

But the competition for space that will occur amongst us until, if unchecked, we reach the stage of standing room only, will be mirrored by a much more grim and immediate struggle amongst the people of the underdeveloped countries. Latin American population is expected to triple by 2000 A.D. By then Asia will have a population of 4.4 billion, which will constitute over 60% of the world's people. Within Asia, India is a

special case because her poor are already dependent upon the importation of seven million tons of wheat each year. Her population which was only 270 million in 1930, is now about 480 million and will be over 700 million in thirty years time. Her food production per capita, as in *all* the underdeveloped countries, is falling further and further behind the rise in population. Surplus food from the United States, even if we greatly increase our own production, will only be sufficient to make up the deficit for perhaps a decade. In these countries today the diets are deficient and most of the people go to bed feeling hungry. The situation is serious now, can you imagine what it will be like by the year 2000 when 80% of the world's population live in these areas? And if you can look with equanimity upon that prospect, remember that the world population is now doubling every 30 years! What will it be like in the year 2300, or 2600?

Let me move on to matters of food production and see what statistics can illuminate that area. Except for Burma, Brazil and Nigeria there is no country in the world that has any significant amount of new arable land to open up for farming. Hence, the only way to get more food is to improve existing production methods. This has been done with spectacular success in the United States and also in Japan. But to achieve this success a number of conditions must occur, one of them being enlightened management, seldom occuring in Nations with feudal ownership. There must also be sufficient surplus money or capital available so that farmers may mechanize and buy artificial fertilizers. This implies each nation having capital to build factories to produce fertilizers, and in some cases farm machinery and tractors as well. There must be the possibility of artificial irrigation of the land if there is not sufficient rainfall. There must be an adequate transportation and marketing system, and lastly a reasonably high percentage of literacy and education so that the whole system can function. According to some research scientists there is hope of utilizing algae, seaweed and even tree leaves for specially processed food, but these possibilities would also demand heavy investments of capital. In the meantime, the more money a country has to spend on buying or raising food, the less capital it has to achieve the educational and technological level required to make birth control methods effective, and to offer a human as opposed to animal quality of life to its citizens. Imports of surplus food to underdeveloped countries, even if they were to be increased five fold by the year 2000, would still only amount to 5% of their total consumption needs. There is less grain food available now per person in the underdeveloped countries that before World War II. World grain yield must increase by 150% in the next 35 years if even the present meager diet in the underdeveloped countries is to be maintained. The United States Department of Agriculture's excellent report entitled "Man, Land and Food" concludes in an unemotional little sentence "Trends in food trade show that the less developed world is steadily losing the capacity to feed itself."

What all this adds up to is famine, and probably wars as a result of famine. Famine is coming upon the world on a scale that should terrify us. Not just the occasional famines that used to plague India and China, but continuous and ever widening areas of starvation. By the late 1980's you may expect the front pages of our newspapers to be covered with the photos of starving and dying children.

And is it not ironic that the great increase in the numbers of children have come about as the result of brilliant scientific and medical research as well as the humanitarian efforts of Government and private organizations in sharing this knowledge and wealth? It is the ability to control malaria that more than anything else has lengthened the lives of people in the tropical zones, and hence raised the birth rate there. It is the United Nations and American programs like Point Four that have done so much to improve the general health in backward countries, and so increased their birth rate.

In each of our church denominations, have we not with unselfish if shortsighted charity, collected money so that surplus food could be given to the hungry? We must no longer indulge ourselves in this unrealistic way of giving, we must address ourselves to the causes as well as to the symptoms of insufficient food. The children we kept alive 15 years ago are now raising large families of their own, and these new faces come to haunt us with their greater needs. If we really want to help, we must work for a massive world-wide program of birth control. For every dollar we donate for food, we must give another dollar for family planning. Here at home we must be willing to revise our attitudes and perspectives about the nature and size of families. For instance, it bas been assumed that if parents had enough money to insure a fulfilled life for their children, they are morally justified in having just as many children as they wish. However, children, rich or poor, use up natural resources and hence the number of children in families can no longer be considered as matter for individual choice. Probably the responsible attitude of parents should be that they are justified in raising two children of their own, but if they want more, they should turn to adoption agencies.

Some countries have made serious attempts at family planning and birth control and have even achieved a measure of success. Japan, South Korea and Taiwan have all made significant reductions in the birth rate of their countries. It is theoretically possible to reduce the world population to balance food production, but it requires far more financial and technological help, far more changes in cultural attitudes, than it is possible to provide in the limited time available before famine sets in. One of the difficulties in implementing a birth control program, even in a country which wants it, and has the appropriate conditions for it, is that there is not yet a really simple, cheap, universal and effective method of avoiding conception. For one reason or another neither the pills nor the inter-uterine devices are ideal, and yet, in spite of the obvious need, relatively little research has been done in this field. I am told that there are only about 150 scientists working directly on the physiology of birth control in the United States, and that less than ten million dollars are spent yearly in this general area.

Let me now close by making some recommendations:

1.) Food production is *not* the answer to overpopulation, and to concentrate our hopes and energies in this direction would be a serious strategic error, and for those who knew better, a moral sin. At best, increased food production can only buy time for effective birth control methods to be applied.

2.) Demographers and agriculturists must get together and combine their information, particularly in the academic and government communities. Too often one hears a lecture by a population expert, and then another lecture by an agricultural expert, and the implications of what they are saying are not inter-related. These two disciplines must work and plan together so the public will be better able to understand the problem.

3.) We must, through government and private agencies, invest a great deal more money and scientific staff in devising new methods of birth control. We should aim to discover something simple like a male sterility injection which would be effective for a desired number of years.

4.) Private agencies cannot themselves handle the problems of birth control. Their primary function is to provide leadership, to experiment and to inform the public about the problem. The task is so great that only governments using tax money can handle it. I believe this is probably true throughout the world as well as in the United States. The idea and practice of birth control must permeate the lives, attitudes, practices of all levels of society. Private agencies by themselves cannot bring about such a public change. For example, in our own country birth control clinics should be part of the services of every hospital and health clinic, as well as operating in separate locations.

5.) Men like Senator GRUENING and others who take leadership in Government must be given open and continuous support when they take political risks.

6.) The Churches have the opportunity for giving much needed moral encouragement for birth control. I believe we Churchmen can find a better guidance from God by looking directly into the faces of hungry families, than discussing long outmoded and never too accurate theological systems and ecclesiastical pronouncements. Starving children demand theological revisions.

7.) As citizens we must grow in our understanding of what social responsibility means in the twentieth century. It used to be considered our duty to prepare the environment for the next generation. Now we must prepare the next generation for the environment. In other words we used to assume that our responsibility was to adjust and improve the material order for the benefit of our children. Now we recognize our world is a spaceship with finite natural resources, and that cannot support unlimited population. Hence, we must reverse our goals, and exercising our God given dominion over our own biological nature, limit population growth so that it is in balance with nature and social realities.

In conclusion, it is the Christian faith that God does not give us greater problems than we can handle. I believe this because I believe in the power of the Resurrection of Jesus Christ. This means as Christians we can say with confidence there is no inevitability to nuclear war, that we can remove the injustices of racial prejudice from our society, and that there is a way to balance food production and world population. However, it is also part of our Christian understanding, that unless man in honesty and unselfish love for his brother faces his social problems, he and his civilization may be destroyed. May God grant us a measure of His love and strength that we may be enabled to do His will in this hungry world. Amen.

POLICE BRUTALITY—PEOPLE BRUTALITY

Mr. TALMADGE. Mr. President, with all the trumped up charges these days of so-called "police brutality" there appears in this week's issue of U.S. News & World Report an excellent newspaper article concerning the very real and increasing problem of "people brutality" against law enforcement officers.

Written by Reporter Bill Shipp of the Atlanta Constitution, this article very forcefully points out that the citizens of this country would do well to concern themselves more with brutality and assaults against policemen than with the hollow shouts of "police brutality" by criminals and professional agitators, whose complaints very seldom ring true.

It is shocking indeed when policemen in the exercise of their duty to protect the lives and property of our citizens are

set upon and assaulted—very frequently by mobs going to the aid of the criminal instead of the law officer. To my mind, such disgraceful conduct is part and parcel of a growing disrespect for law and order in the country today. Certainly, this trend must be reversed.

I commend this article to the Senate and ask unanimous consent that it be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

[From the U.S. News & World Report, Aug. 8, 1966]

"POLICE BRUTALITY" VERSUS "PEOPLE BRUTALITY"—A REPORT FROM ATLANTA, GA.

(NOTE.—Following is an article by Bill Shipp of "The Atlanta Constitution," published in the July 10 issue of the Sunday "Journal and Constitution" and reprinted here with permission of that newspaper.)

Talk about brutality and police. Ask Atlanta Detective J. P. Arnold, member of the "good guy" Crime Prevention Bureau, what he thinks about brutality.

You may have difficulty understanding his reply. His face is held together by wire. He has difficulty opening his mouth to speak.

The mild-mannered Negro detective, assigned to the police department's helping-hand squad, recently talked with a father about a juvenile-delinquency problem. When the conversation ended the father beat Arnold up. The first blow shattered the detective's jaw so badly that he could not yell for help. Arnold finally shot the man in the leg to save himself from a possible fatal beating.

Talk about brutality. Ask the Atlanta patrolman who, in June, wrote matter of factly on a report form: "While attempting to unload prisoner at city hall, I was struck across the throat with a knife . . . six stitches."

Talk about brutality. Ask the Atlanta officer who was choked by two suspects wearing handcuffs. Or the one who was shot and had to crawl out of an alley yelling for help. Or the one severely bitten by a dog sicked on him by a woman suspect. Or the one severely bitten by a woman suspect. Or the one who broke a flying chair with the top of his head when he walked into a beer-joint free-for-all.

Talk about brutality to Lieut. C. W. Blackwell, keeper of police statistics and reports. He'll show a filing cabinet full of reports recounting acts of violence and mayhem directed at policemen that make Mickey Spillane novels seem as tame as Sunday-school lessons.

DISARM THE POLICE?

Much has been said lately about police brutality. The American Civil Liberties Union of Georgia recently turned out a scathing report on mistreatment by Atlanta policemen.

Howard Moore, an ACLU official and general counsel for the Student Nonviolent Coordinating Committee, has called on local police officials to disarm Atlanta policemen and detectives to reduce "police brutality."

Detective Superintendent Clinton Chafin thinks Moore has a great idea "if they'd take all the guns away from everybody else." He pointed out that the Atlanta gun market is glutted with 10-dollar, .22-caliber pistols and "they can kill you."

Despite the talk about police brutality, there is good evidence that "people brutality" against policemen is a greater and faster-growing problem. Not only in Atlanta, but nationally.

In New York in 1965 the number of assaults against policemen increased 25 per cent over 1964.

If the present trend continues in Atlanta, more than one out of every 10 policemen and detectives will be injured this year while making an arrest.

Since 1961, 406 Atlanta officers have received a major injury while making an arrest.

"That figure doesn't count all the black eyes and bloody noses and scratched faces," Lieut. Blackwell points out. "That figure means an injury serious enough to require hospital treatment."

Last year 78 policemen were sent packing to the hospital after a bout with a suspect. During the first six months of this year, prisoners or would-be prisoners have sent 40 policemen to the hopital.

What's the reason for the increasing number of assaults against policemen?

Many officials cite a growing antagonism toward authority of any kind.

Atlanta Police Chief Herbert T. Jenkins agrees that is one factor. But he points out that a growing population means more arrests and more arrests automatically increase the number of assaults against arresting officers.

BRUTALITY—OR HASTE?

What about the other side of the coin—policemen brutalizing suspects?

"This department uses force only when necessary," Jenkins said. "Police brutality—the kind you are talking about—simply does not exist here. Of course, we have cases when officers act too hastily."

Look at the policeman's side of it:

"A policeman called to the scene of a crime must make an instant decision on what action he must take, then take it," Blackwell said.

"A judge may be presented with the same set of facts a month later. He can take all the time he needs in deciding what to do about it. But not a policeman. He has to act—and act now. Naturally, his judgment may not always be the best in the world."

Jenkins added: "The charge of police brutality is as old as law enforcement. A prisoner's best defense often is to accuse the arresting officer of brutality. If he can discredit the officer, then he stands a good chance of winning the case."

Recent Supreme Court decisions have all but made legalized police strong-arm tactics a thing of the past.

Unlike many of his brother police chiefs, Jenkins said he has no criticism of the High Court.

"The Supreme Court has the same responsibility as the police—to guarantee the freedom of the individual and to furnish security to individuals and property," Jenkins said. "It's impossible to have 100 per cent security and 100 per cent individual freedom."

Right now, Jenkins added, the emphasis seems to be on individual freedom.

THE ONE-MAN PATROL CAR

Another measure against police brutality in Atlanta is the use of one-man patrol car, according to the chief. He says a man working alone is much more likely to try to talk, rather than slug, his way out of a bad situation.

It also would seem that a man alone is much more likely to be on the receiving end of an assault. But Jenkins says this is not true.

While the curbs against police brutality appear formidable, the controls against "people brutality" seem to crumble with increasing regularity.

Part of the reason for this says Jenkins, is the growing "racial and social revolution."

The people caught up in this revolution see the police, rightly or wrongly, as the symbol for all they are against.

As a result, Jenkins' men and the men like them across the country will continue to be on the receiving end of shootings, bitings, sluggings, kickings and so forth. And their job, always a dirty and dangerous one, appears to be getting dirtier and more dangerous by the day.

POWER PROBLEMS IN NEW ENGLAND

Mr. MUSKIE. Mr. President, the Rutland, Vt., Herald has recently published a series of six articles on electric power in New England. These articles, by Stephen C. Terry of the Vermont Press Bureau, present a fair and broad view of the power problems confronting all of New England, particularly Vermont, New Hampshire, and Maine. I ask unanimous consent that these articles be printed in their entirety at this point in the RECORD.

There being no objection, the articles were ordered to be printed in the RECORD, as follows:

[From the Rutland (Vt.) Herald]

PRICE OF ELECTRICAL ENERGY IN NEW ENGLAND: MUCH DEBATED, MISUNDERSTOOD

(EDITOR'S NOTE.—The following is Part I of a six-part series dealing with the price of electricity in New England. The author of the series has investigated electrical rates in New England, which are the highest in the nation, and the proposals to lower these rates. The series will present his findings and observations.)

(By Stephen C. Terry)

MONTPELIER.—Kilowatts. Kilowatt-hours. Mills. Kilovolts. These are all terms which confuse most of us.

But when you understand them you begin to realize they are part of the "price" you pay for living.

Reddy Kilowatt doesn't tell you about the "price" for living in New England, but you can tell by just looking at your next electric bill.

Just as the quart is the measure for milk, the kilowatt hour (KWH) is the measure for energy.

A kilowatt is 1,000 watts. A kilowatt(KW) is the term used when measuring the unit of power generated.

If a 100-watt bulb was to burn continuously for 100 hours, it would use 10 kilowatt-hours.

A mill, which is one-tenth of a cent, is the term used for computing the cost of your electricity, just as the cent is used for figuring out how much you pay for a quart of milk.

A kilovolt is 1,000 volts and is used when describing the push it takes to put the energy into the high tension wires that run by your house and carry it into your home.

The "price" is for electricity that you use to cook your meals and run your many appliances. It enables you to watch television. The average household's use of electricity in New England is about 250 kilowatt-hours a month.

For this, New Englanders pay an average monthly bill of $8.57.

Because you live in New England rather than the Tennessee Valley, you pay $3 more during an average month for 250 kilowatt-hours of energy.

New Englanders pay the highest electric rates in the continental United States for every major use category—residential, commercial and industrial.

The average commercial user in New England—storekeepers, small manufacturers and municipal governments—paid up to 29.8 per cent above the national commercial rate average last year.

New England industrial users pay higher rates than any other industrial users in the nation.

Rates are as high as 12.7 per cent above the national average.

Because of the high industrial rates there are no aluminum refineries in New England, or any other heavy consumers like the electrochemical industry, according to people who run such businesses.

The attitude taken by Robert Schill, vice president of the Central Vermont Public Service Corp. of Rutland, is similar to that of the other New England utility officials.

When questioned about high industrial rates and the lack of heavy users, Schill says that critics of high industrial rates should be asked if they want "aluminum plants or steel mills and other large scale industry in Vermont along with the problems that go along with such form of industrial growth."

Rhode Island textile manufacturers have long complained about high industrial power rates and say this is part of the reason for the exodus of the industry into the cheap power areas of the Tennessee Valley and the southeast-central United States.

In 1962, manufacturing industries in the New England states purchased a total of 12 billion kilowatt-hours of energy. The cost was $180 million.

The kilowatt-hour cost came to 14.901 mills, or 66 per cent higher than the national average.

If industrial power costs in New England had been on par with the national average for the case history in 1962, New England's manufacturers would have saved $71.4 million in their power bills.

New England is the greatest fortress for the investor-owned (private) utilities in the country. They produce about 98 per cent of the region's use. The national average is 77 per cent of the investor-owned utilities selling to consumers.

It is the only region in the United States that doesn't have a federal power project. The New England private utility industry is now fighting to retain that honor.

What is the situation in Vermont?

First of all, Vermonters are better off than their fellow New Englanders. Why?

The reason Vermont residential rates are only a trifle above the national average is because the state buys publicly-produced power from the public Power Authority of the State of New York (PASNY) and resells it to the Vermont utilities on the basis of their rural and domestic customer requirements.

Thus, Central Vermont Public Service Corp., the state's largest utility, buys the biggest share of the 150,000 kilowatts of PASNY power available annually to the state.

A case history of Vermont and the arrival of PASNY power tells part of the story why New England's rates are the highest in the nation.

On Jan. 1, 1959, residential consumers in Vermont paid an average of $8.90 for 250 KWH. That was the highest state average in the continental United States.

A year later, after the first influx of PASNY power, the Vermont 250-KWH rate dropped to $7.91.

In 1962 the average state bill dropped to $7.84.

Last year the average Vermont bill for 250 KWH was $7.63, or three per cent higher than the national average bill.

The New England average bill last year was $8.57.

Before PASNY power, CVPS for instance was selling energy to consumers at an average of 33.9 mills per KWH.

Last year the same utility was selling energy at an average cost of 25.27 mills per KWH. The United States average, which includes all power regions, was 16.8 mills per KWH.

Since the PASNY power, CVPS has reduced rates by almost $2 million.

Before publicly-produced power was available to CVPS, Albert A. Cree, the chief executive officer, had to purchase higher cost power from the New England Electric System of Boston.

Now CVPS and the other Vermont utilities are free from the high prices of New England Electric and can bargain elsewhere for their power.

While Cree doesn't admit it, it is known he is happy to be "free" from the "Boston boys" and since PASNY, his power profits have soared.

In a speech before New York security analysts in October, 1957, Cree said because of PASNY power "the company expects that this will result in significant and continuing earnings improvement."

He also said that the earnings will improve because "the reduction in electricity costs to the customer which will be realized will have a very stimulating effect on electricity use by the customers and upon the whole economy of the company's service area, so that the company should benefit substantially as the area economy benefits from this relatively large amount of cheaper power."

Not everyone in the state feels he is getting the benefit of PASNY power as cheaply as CPS.

One of the most vocal critics is Walter N. Cook, manager of the Vermont Electric Cooperative of Johnson.

He complains that once the Vermont Electric Power Co. (VELCO), which is a transmission company set up to transmit PASNY power throughout Vermont, levies its tolls, the low-cost benefits are lost.

VELCO is 87 per cent owned by CVPS and it buys PASNY power from the state at the state line for about 5.6 mills per KWH.

VELCO charges transmission tolls of more than two mills per KWH to other utilities. The national average for transmission cost is 1.7 mills per KWH.

Cook says that after VELCO levies its tolls and delivers it to the subtransmission lines of the other utilities for distribution to the Vermont Electric Cooperative systems, the cost of the power has increased by 50 per cent.

He also says that consumer-owned co-ops, unable to build large plants or tie in with transmission lines, "are at the mercy of the electric power giants which local commissions and the Federal Power Commission seem unable to control effectively."

Thus, in New England the big power companies own all of the heavy transmission lines because co-ops don't have the money to build big generating plants, and municipal electric systems can only build within city or town limits.

In order for the little systems to get enough power, they must buy from the investor-owned utilities and bear all of the private utility's charges.

In Massachusetts, for instance, the wholesale rates paid by the Massachusetts municipal electric systems range from 50 to 100 per cent higher than those paid by municipal systems to comparable private power companies in other parts of the country.

James Baker, manager of the Shrewsbury, Mass., electric plant, recently told a congressional committee in Washington that these high wholesale rates are a serious economic detriment to the Massachusetts electric systems and the communities served.

The Federal Power Commission is just now beginning to look at the wholesale power rates charged by investor-owned utilities to municipal co-ops.

While power costs are high in New England, power consumption is, not surprisingly, 33 per cent lower than the national average.

U.S. Senator GEORGE D. AIKEN, Republican of Vermont, calls private power interests in New England the "scarcity-and-high-price clan."

The high prices in New England do keep down the amount of energy consumed.

POWER PRICE COMPARISON

MONTPELIER.—Here is a comparison of the average monthly electric bills for residents in New England and other parts of the nation.

The average bill is for 250 kilowatt hours a month.

Vermont, $7.63.
Massachusetts, $8.88.
Maine, $8.82.
New Hampshire, $8.82.
Rhode Island, $8.73.
Illinois, $7.70.
Montana, $6.98.
Connecticut, $8.24.
Tennessee, $4.89.
State of Washington, $4.81.

In Tennessee, the power available to households is mostly from the public power project in the Tennessee Valley.

In Washington, the utilities—public and private—work together and pool their power resources.

[From the Rutland (Vt.) Herald]

SCANT RESOURCES OF POWER

(EDITOR'S NOTE.—This is the second in a series of six articles on the factors which go into the price of electricity in Vermont and New England. This article goes into problems of generating and distributing which are cited in the industry in generating and distributing the power.)

(By Stephen C. Terry)

MONTPELIER.—The rocky soils of New England bear no coal or oil reserves.

The low usages of electricity and the old "tea kettles" that produce power are some of the reasons for your high monthly bill.

This, coupled with high administrative costs, many small inefficient power plants, high taxes and the lack of a competitive yardstick, make your electric bill the highest in the nation, on the average.

The costs of electricity to the consumer is divided into three major categories—generation, transmission to the principal load centers and distribution to the householder.

Generation and distribution charges far exceed the national averages.

The private electric industry lays the blame for producing the highest cost power in the nation to the high taxes in New England, the high fuel costs and low consumer use.

"It's a vicious cycle. High rates promote low consumer use. We have been struggling with this for years," says Howard J. Cadwell, chief executive at the Western Massachusetts Electric Co. of West Springfield, Mass.

Heavy industries such as aluminum refineries are not to be found in New England, and the owners say one of the reasons is the price of power.

A spokesman for a private utility said critics of high industrial rates should be asked if they want "aluminum plants or steel mills and other large-scale industry in Vermont along with the problems that go along with industrial growth."

This doubt is not limited to private power interest.

In Springfield last week Gov. Philip H. Hoff said he was "not terribly anxious to see really heavy industry located in Vermont." He expressed a preference for industries in the fields of electronics, machine tools and plastics which Springfield already possesses.

Coal accounts for two-thirds of the fuel used to produce electricity in New England. Other fuels are oil, gas and, of course, water power which serves as fuel by turning turbines which in turn generate electricity.

Residual oil is the thick, gummy substance that is the final by-product of crude oil after it is refined.

The oil is used to heat industrial buildings and schools as well as fuel for generating power.

Ninety-percent of the residual oil used by the northeast utilities is imported from Venezuela.

Last year New England utilities burned 10,640,000 tons of coal.

The latest figures available for use of residual oil in the region is for the 1963 usage of 70,593,000 barrels, according to the New England Council.

Residual oil is purchased by the barrel, and a barrel roughly equals one fourth of a ton of coal in heat equivalent.

However, New England doesn't have the fast, flashy rivers that can produce enough cheap hydro power.

There are many undeveloped sites, but hardly any of them could be developed in terms of today's dollars and still produce cheap power.

Hydro-electric power is still the cheapest power available if there is enough to make construction of dams worthwhile.

But the fast-developing technology in nuclear power for the New England region has made large-scale conventional hydroelectric plants almost obsolete.

In New England, the average generation costs (which means the amount utilities have to pay to produce a kilowatt-hour of energy) is 9.7 mills. This is 1.2 mills higher than the national average of 8.5 mills per KWH.

When a coal train leaves the mining fields in West Virginia and Pennsylvania, the ultimate charges to the private utility increase every mile it moves either by train or barge to the New England utilities.

By the time the coal reaches New England the average price is 33.9 cents per million British thermal unit (BTU) compared with the national average of 26.1 cents.

(A BTU is a measure of heat energy. It is the quantity of heat energy required to raise the temperature of one pound of water one degree Fahrenheit at sea level.)

Coal costs have dropped some in the last several years, as a result of competitive pressure of nuclear fuels as a source of producing power.

However, utility magnates in New England seem to be relying too much on the high cost of coal as the excuse for high rates.

In a speech in 1962, former Federal Power Commission Chairman Joseph C. Swidler said if fuel costs had been brought down to the national average, the bills to the ultimate consumer would have been reduced by only five percent, leaving New England rates still well above the national average.

The situation of 1962 is applicable today.

The federal government has just relaxed its quotas on residual oil imports, but the cost effect on utilities located on the sea coast of New England won't be that much.

The problem goes deeper than the high cost of fuels.

Put simply, there are just too many utility systems in the region.

There are now 39 different investor-owned utilities in New England which own a total of 73 thermal generating plants (those that use fuel to make steam), 93 hydro-electric plants producing power, and one nuclear plant.

In addition, there are 26 municipal systems and three electric cooperatives producing their own power, and 88 municipal and co-ops buying power from the private utilities for their consumers.

The multiplicity of plants means a multiplicity of payrolls and other administrative expenses which are put at 87 per cent above the national average.

While there are many systems in the region, there are also many small old plants which are inefficient.

The average size of all New England power stations is 50,000 kilowatts and there are many plants under the thousand-kilowatt capacity.

Most of these are the "tea kettles" and small hydro plants, fully depreciated but used to meet peak power demands.

Because the utilities keep many of these plants "on the line" they are costing the consumer money. Even though the plants are in most cases fully depreciated, it still costs money to operate the facility because of fixed charges.

Utility officials justify keeping the old, inefficient plants in operation because they claim they're used to meet emergencies.

"We don't throw away our plants, and when the day comes to meet an emergency, we are ready," says Albert A. Cree, chief executive at the Central Vermont Public Service Corp. of Rutland.

The blackout last Nov. 9 proved the old plants weren't much use in restoring light to a darkened northeast United States, except in their immediate localities.

The New England average "heat rate," and engineering term that is used to express the BTU's necessary to produce a kilowatt-hour of energy, is a good indicator of the efficiency of the New England power plants.

While the national average heat rate last year was 10,558 BTU's per KWH, the New England average was the highest in the nation at 11,019 BTU's per KWH.

Progress is being made by the New England utilities to increase plant efficiency. In 1964 the New England Electric System's Brayton Point station near Fall River, Mass., achieved the lowest heat rate in the nation of 8,771 BTU's per KWH.

The Brayton Point station is able to generate power at a cost of 5.9 mills per KWH because of increased plant efficiency. (The lowest cost foreseeable for conventional New England fuel plants is five mills per KWH.)

Distribution costs in New England are 6.2 mills per KWH higher than the national average of 6.6 mills per KWH.

This is partly due to the low usage by consumers because of the high prices, and the multiplicity of transmission grids which brings power to the distribution centers.

The transmission grids that are now established in New England are of low capacity compared with the new very high-voltage grids. The lines are also old, thus pushing costs up.

Another reason for the high cost of electricity is the high cost of land for rights-of-way and higher construction costs in New England.

New England utilities say that the high local and state taxes are one of the principal reasons for the highest rates in the nation.

Excluding federal income taxes, the investor-owned utilities paid in 1964 an average $40.12 per $1,000 of net electric plant investment.

The national average was $31.53.

Massachusetts utilities paid more than the New England average—an average of $50.35 per $1,000 of net plant investment.

One of the reasons for the cause the average includes many public utilities which are tax exempt, and which pay no taxes to state or local governments.

New England has no federal power project and the tax exempt utilities produce only two per cent of the region's electrical requirements.

The lack of a federal power project, which the private utilities are now fighting desperately, has deprived the consumers of a chance to compare rates.

The private utilities claim it isn't fair to judge a tax-paying utility against a non-tax-paying utility, saying the consumer somewhere along the line has to make up the difference.

But the fact remains the only region in the country that doesn't have a federal power project has the highest rates in the nation.

Cadwell, of Western Massachusetts, admits the high rates may be partly due to a lack of a public competition, or a "yardstick."

He says candidly: "We have no Dickey around to compare ourselves with."

Dickey is the name given the Dickey-Lincoln School federal power project proposal in Maine that the private utilities in the region are fighting in Congress.

[From the Rutland (Vt.) Herald]

PRESSURES OF OPINION HIT UTILITIES—BLACKOUT, INCREASED DEMAND PUT NEW ENGLAND FIRMS IN SPOTLIGHT

(EDITOR'S NOTE.—This is the third of a series of six articles on the situation of electric power in New England and Vermont. This one describes how attitudes within the industry and outside it have shifted during the past year, due to a variety of developments.)

(By Stephen C. Terry)

MONTPELIER.—"I'd be a liar if I told you we didn't wake up when someone was hitting us over the knuckles," says an executive of a Massachusetts private utility.

Howard J. Cadwell, chief executive of the Western Massachusetts Electric Co. of West Springfield, admits his industry as a whole has shifted gears in the past year.

For the past year, the New England electric industry has come under harsh criticism from politicians and the Federal Power Commission.

As the result of the prodding, the industry has told the public more than it ever has before about its plans to build new facilities which, it hopes, will reduce the consumer price for electricty.

The sudden interest in New England's high average power costs has been most dramatic since last year's Nov. 9 blackout when most of New England went dark with the rest of the northeast because of a massive power failure.

Since then the spotlight of public opinion has been shining brightly on the industry as a whole.

The prodding began in October, 1962, when former FPC chairman Joseph C. Swidler spoke before the Electric Coordinating Council of New England—a group of investor-owned utilities.

Swidler laid it on the line for the industry and told it the FPC was closely examining the New England utilities in the national power survey which began that year.

The report was issued in December, 1964. It set a target of 27 per cent reduction in the average price of electricity to consumers by 1980.

The new chairman of the FPC, Lee C. White, in a speech in Boston last May, said he is watching the high rates in New England and warned the private utilities that they have a long way to go if rates are to be down to the national average by 1980.

In the waning weeks of 1964, the New England utilities were blasted with both barrels and Vermont's Gov. Philip H. Hoff pulled the trigger.

At a meeting in Boston of representatives of the nation's public power groups (the Rural Electric Cooperatives Association, the Electric Consumers Information Committee and the American Public Power Association) he spoke before the New England utility commissioners and a meeting of the New England Governors' Conference.

After that presentation, Hoff's fellow-governors named him a committee of one to seek low cost sources of power.

Since then Hoff has been using his appointment as a political weapon against the New England utilities to prod them into doing something about lowering rates.

In February, Hoff went to hear a speech in Boston given by Newfoundland's premier, Joseph C. Smallwood, who described the ambitious hydro-electric project planned for Churchill Falls in Labrador.

Smallwood was trying to drum up support for the project and was looking for buyers of the vast resources of energy

among the New England and New York utilities.

Smallwood proposed that power be transmitted into New England by 1,517 miles of cable stretched under the ocean.

Hoff then went to Quebec City and met with Quebec Premier Jean Lesage in an attempt to import a small amount of power from the Quebec Hydro-Electric Commission, an arm of the government.

Lesage informed Hoff that Quebec-Hydro might buy the power produced at Churchill Falls and asked Hoff if he would be interested in that proposal.

Ever since Hoff publicly broached the idea last September, the New England utilities have been annoyed.

The news about the possibility of importing about two million kilowatts of Canadian power annually broke about the time the New England utilities were lobbying their hardest against approval of the Dickey-Lincoln School public power project planned for the St. John River in Maine.

Suddenly, politicians began asking utility executives questions.

Traditionally, in New England politics, politicians have left the utilities alone. This explains why some of the New England governors are still cool to Hoff's proposal.

In Washington, New England utility executives led by Albert A. Cree, chief executive of the Central Vermont Public Service Corp. of Rutland, were appearing before congressional committees testifying how the New England private utilities could lower rates.

Meanwhile Hoff was asking questions of New England utility leaders and quietly lining up political support.

As a result of the prodding by the politicians, the utility leaders began talking about their plans to improve existing plant facilities.

Several months before the Hoff announcement, another Vermonter, Charles R. Ross, a member of the Federal Power Commission, took some pokes at the private utilities in a speech before the New England public utility commissioners, and made suggestions how the investor-owned and the publicly-financed utilities could lower rates. The basic suggestion was that the two work together instead of against each other.

However, the real pressure of public opinion against the private utilities in New England came as a result of human error somewhere in the vast power grids in Ontario.

When the lights went out in Ontario, juice throughout all the New York state power transmission grids went out and, subsequently, links with Vermont and New England failed to meet the demands of the New England grids.

Just as the utilities were off balance because of mounting political pressures from Hoff and Dickey-Lincoln—the lights went out in every New England state except Maine during the evening rush hour.

New Englanders demanded answers. Utility leaders have been responding ever since.

In Massachusetts, the Legislature created a commission to investigate the massive blackout and costs of the price of power.

It was also directed to look at the rate structures and the financing of public utilities and privately-owned utilities.

The commission hasn't yet been given any money to operate, however.

The New England public utility commissioners also investigated the New England blackout.

Not all the private utilities executives in New England agree with Cadwell that the pushing of Hoff and the threat of Dickey-Lincoln has "awakened" the private utilities.

Cree, for example, says that technology is just catching up with itself in New England.

"The effect of Hoff and Dickey-Lincoln has been nothing—it's just caused us trouble," Cree said, in a sharp contrast with Cadwell.

Cree testified before a Vermont Legislative Council subcommittee earlier this year and said that the reason the New England utilities were reacting to the Dickey-Lincoln proposal and the Hoff Canadian power bill was:

"The problem has become a political one and we must deal with it."

The fact remains that the private utilities in the six-state region have revealed extensive long-range plans.

[From the Rutland (Vt.) Herald]

THE UTILITIES IN ANSWER: "BIG ELEVEN"—PRIVATE POWER FIRMS COUNTER ONSLAUGHT OF GOVERNMENT AIMS—OFFER REGIONAL LINK

(EDITOR'S NOTE.—This is the fourth in a series of six articles on electric power in New England which has the highest average price in the nation. The article below describes what the region's investor-owner utilities call the "Big Eleven Power Loop," examining the aspirations about generating costs as compared to administrative and distribution costs).

(By Stephen C. Terry)

MONTPELIER.—Late last year the heads of the New England investor-owned utilities got together and complained that they were getting clobbered by public opinion.

A decision was reached to hire a New York City advertising firm to "do something about our public image."

A source within the electric industry explained recently the industry's decision to form the "Big Eleven Power Loop."

The utility official asked to be kept nameless because "I want to keep my job."

He said, pointing to a map of New England: "All we're hearing about is low-cost power from Dickey-Lincoln and Gov. (Philip H.) Hoff's plan to import low cost power from Canada."

"So we hired an advertising firm to help us with promotion and to get the story across to the public by television, radio, and newspaper advertisements."

Furthermore, each utility is responsible for his own state and pays for the advertising campaign according to the number of customers it serves.

What is "The Big Eleven Loop" and how did it grow?

First, it is in direct response to the announced plans to build the first federal power project in New England—in Maine at the Dickey-Lincoln School site—and to Hoff's plans to try to import Canadian power.

There are many different stories among the utility executives as to just when the actual planning really began for what is now mapped out as the "Big Eleven Power Loop."

Albert A. Cree of the Central Vermont Public Service Corp. of Rutland, says that plans for the "Big Eleven Loop have been in the works and partly in the planning stages since 1948."

A recent news release from the New England Electric Co. of Boston said that the "Big Eleven Loop" is the "largest building program ever conceived for the area and planned at least five years ago."

Howard J. Cadwell, chief executive of the Western Massachusetts Electric Co., tells a different story.

According to Cadwell, the idea of getting together and chart "The Big Eleven Loop" began late last year.

He said that individual utilities had been making their own plans for several years.

Cadwell said the loop wasn't tied together until the early part of this year and, as soon as it was, the electric companies made sure the news media got the announcement.

The first time the plans for "The Big Eleven Loop" hit Vermont papers was Jan. 25.

"The Big Eleven Power Loop" will be fully operable by 1973, and the industry says that consumer rates should be reduced by 22 per cent by then in terms of today's dollars.

The electric industry says the loop can mean an annual saving of $138 million in generation expenses.

Taken together, these new plants will add 6,250,000 new kilowatts to New England's generating capacity.

Fossil-fuel plants (oil and coal burning) will provide 38 percent of the new capacity and will be installed early in the period.

Nuclear plants will provide 46 per cent of the power and most will be installed at the end of the six year program.

The one million kilowatt pumped-storage facility planned at Northfield Mountain in Massachusetts will make up the rest of the capacity.

A pumped-storage plant works on the same principle as a hydro-electric plant.

Water, however, will be pumped up Northfield Mountain during the night when power demand is low, and then will be released during the day to turn turbines during peak power demand periods.

The reservoir on top of the mountain will span 300 acres, and will function very much like a giant storage battery.

The industry says that it can reduce generation costs from of 9.7 mills per kilowatt-hour today's New England average to 7.6 mills per KWH in 1973. There are 10 mills in a cent.

To consumers that means, the industry says, a reduction in the price of electrical bills from the average of 24.2 mills per kilowatt-hour today to 22.1 mills per KWH in 1973.

The power industry doesn't expect the average 1.7 mills per KWH transmission charge will drop a bit nor does it expect that the distribution and related administrative costs will drop by 1973.

In fact, very little is being done to reduce distributing and administrative costs outside of three southern New England utilities which have said they hope to merge operations later this year.

In essence, "The Big Eleven Power Loop" will cut production costs of power by 2.1 mills in the next six years—and that is all.

In addition to the 11 new plants, the industry says it will build 700 miles of new transmission lines.

Besides that, the power companies have said, they will retire some 30–40 old steam generation plants, now capable of producing 1 million kilowatts.

The total bill for the construction programs amounts to $1.5 billion. This represents, the electric companies say, a $450 investment for every family they serve.

The key to "The Big Eleven Power Loop" is the industry's hopes to save money on the generation of power, thereby passing on the benefits to the consumer.

Most of their hopes are pinned on nuclear fuels.

The five new conventional fuel plants are expected to hit a low production cost of five mills per KWH.

Power economists say it is almost impossible for conventional fuel plants in New England to drop generation costs much lower than five mills per KWH because of the inherent high cost of fuels. Coal and oil have to be brought from afar.

The production costs will drop from the 9.7 mill New England average to five mills per KWH because of increased plant efficiency.

Private utility executives are really watching the progress of nuclear power development because, after 1973, new plants will be strictly nuclear-fueled—coupled with more

pump storage projects to meet peak power demands, the industry says.

The pride of all the New England utilities is the first nuclear fueled plant in the region now operating competitively with conventional fuel plants at Rowe, Mass. It is called Yankee Atomic.

The Yankee Atomic Co. was formed in 1954 by 10 companies, including Central Vermont Public Service Co. of Rutland.

It went into operation ahead of schedule on Nov. 19, 1960, and cost less to build than the electric companies estimated.

The plant began producing at 12 mills per KWH, but the cost of production has now been reduced to 9.7 mills per KWH.

It is expected to be cut down to 6.3 mills in a 15-month period beginning in 1967–1968. The secret of nuclear plants is simple. The longer it is used the cheaper the electricity produced.

Capital construction costs are higher for nuclear plants than for conventional plants, however.

Utility leaders expect to be able to produce nuclear power in 1973 at a cost of 4 to 4.7 mills per KWH.

By 1978, nuclear plants that are part of "The Big Eleven Loop" should have production costs below four mills per KWH, according to nuclear expert Dr. Manson Benedict of the Massachusetts Institute of Technology.

Dr. Benedict also predicts that, by 1972, nuclear plant "costs are expected to be lower than cost of electricity from coal or oil and as low as coal costs anywhere in the United States."

But production costs don't lower the price of electricity to the consumer by that much, the Federal Power Commission has said, adding that the industry is going to have to concentrate on lowering administrative and distribution costs if the rates are going to be near the national average.

Cadwell admits this and says New England's attempt to lower rates to the national average is "shooting at a moving target."

He says: "No utility man or anyone else can predict the exact reductions by 1972 without knowing such factors as inflation and the demand for personalized services."

Plus, the national average is expected to be reduced because in other regions utilities are moving just as fast as in New England.

This is what Cadwell means by a "moving target."

He also says that if distribution and administrative costs are to be cut, the "economies of scale" will have to increase.

Put simply, utilities have to merge operations.

Cadwell suits his actions to his words. He is the chief organizer of the proposal to merge his company—Western Massachusetts Electric—with Connecticut Light and Power Co. and the Hartford Electric Light Co. into a super-utility called "Northeast Utilities." It would be the largest utility in New England.

Timetable for "The Loop"

MONTPELIER.—Here is the timetable private utilities have given for completion of 11 new plants which will make up the "Big Eleven Power Loop."

CONVENTIONAL PLANTS (FUELED BY COAL OR OIL)

Site:	*Kilowatt capacity*
Boston (year completed, 1967)	400,000
Bridgeport, Conn. (year completed, 1968)	400,000
Bow, N.H. (year completed, 1968)	350,000
Sandwich, Mass. (year completed, 1968)	550,000
Brayton Point, Mass. (year completed, 1969)	650,000

NUCLEAR PLANTS

Site:	*Kilowatt capacity*
Haddam, Conn. (year completed, 1967)	500,000
Millstone Point, Conn. (year completed, 1969)	600,000
Vernon (tentative) (year completed, 1971)	450,000
Boston (year completed, 1971)	650,000
Wiscassett, Maine (year completed, 1972)	700,000

PUMPED STORAGE PLANT

Site:	
Northfield Mt., Mass. (year completed, 1971)	1,000,000

[From the Rutland (Vt.) Herald]

FOUR PUBLIC POWER PLANS FOR REGION—LABRADOR, MAINE, APPALACHIA ALL FIGURE IN NEW ENGLAND VIEW—AIM: LOWER RATE

(EDITOR'S NOTE.—This is the fifth in a series of six articles on the power situation in New England. The fourth article dealt with projects supported by the private power interests of New England. The present article tells about projects supported by public power interests).

(By Stephen C. Terry)

MONTPELIER.—In the wilderness of Labrador flows the Churchill River—the largest untapped hydro-electric resource on the North American continent.

The river isn't a river of commerce, transport or trade. It is a beautiful, untamed giant that holds the key to vast sources of hydro-electric power for Canada and the United States.

New England public power interests are enviously eyeing the possibility of importing low-cost Canadian power.

This is one of the four proposals that consumer-owned and publicly-financed utilities are banking on to reduce New England's high electrical rates.

The other proposals are:

—The Dickey-Lincoln school project in northern Maine. This would be a 794,000 kilowatt hydro-electric development paid for by the federal government. If Congress approves the project, it will be the first federal power project for the six-state region.

—State-of-Maine nuclear power authority. A legislative group in the Pine Tree state is now studying the feasibility of having the state build and run a 1.4 million kilowatt nuclear plant.

—The Yankee-Dixie project. This plan, pushed by the cooperatives and municipal electric systems, would be to construct three large fossil-fueled generating plants in the coal fields in northern Appalachia. The electricity would then be transmitted to 22 states by a very high-voltage transmission system.

A consortium of European and Canadian banking and industrial interests has formed the British-Newfoundland Corp. (BRINCO) to develop the power resources of the Churchill river.

The project doesn't involve construction of large conventional dams. Rather, it is like developing a giant saucer, spanning 35,000 square miles, scooped out of the flat Labrador plateau.

The saucer-shaped basin, which would be kept filled with water by a river diversion scheme would act like a huge bathtub the size of all New England exclusive of Maine.

The "bathtub" will be located on the plateau.

The water stored will cascade down a series of rapids and chutes to Churchill Falls, where the water drops some 400 feet.

At the falls will be located the powerhouses.

The project would produce 4.5 million kilowatts, according to present estimates.

The awesome project has caught the fancy of the Quebec Hydro-Electric Commission, an arm of the provincial government.

Quebec Hydro is about ready to sign an agreement with BRINCO to buy the 4.5 million kilowatts of power. The government power company is looking to the United States for a buyer for 1.2 million of surplus kilowatts for the next 25 years—starting in 1972.

The possibility of buying that much power, which supporters say can be generated and transmitted to New England load centers at a price of 3.89 to 4.03 mills per kilowatt hour, has the public utilities in New England wide-eyed.

The investor-owned utilities are doing everything in their power to stop the importation of Canadian power, and lobbied hard this spring against an importation proposal which was before the Vermont Legislature.

The Vermont public power interests—officials of municipal and rural electric cooperatives—have formed the Vermont-New England Power Co. (VNEPCO). The new corporation has ben dickering with Quebec Hydro to buy 1.2 million kilowatts, for Vermont use or resale to New England municipals and co-ops. The proponents claim it will reduce present rates by 25 per cent. This has never been proved, however.

VNEPCO is also thinking of dealing with the public Power Authority of the State of New York for 40 per cent of the power.

Current plans call for the VNEPCO to sign an agreement with Quebec Hydro for the 1.2 million kilowatt block before the summer is over. The power is expected to be available in 1972 for a 25-year contract.

The private utilities in the region aren't likely to be able to share in this low-cost power because of VNEPCO's desire to deal with publicly-financed utilities as a prerequisite for qualifying as a non-profit, tax-exempt corporation, according to VNEPCO lawyers.

Gov. Philip H. Hoff's plan, which was stalled by the 1966 Legislature, would have set up a corporation to serve as a vehicle for importing Canadian power for all utilities, public and private.

VNEPCO was formed after it appeared Hoff's plan would never see the light of day.

While the private utilities have been trying to discourage importation of Canadian power, they are also involved in a political battle against the federal government which has indicated it wants to construct a federally-financed power project in northern Maine.

Preliminary project plans call for a dam—340 feet high and 9,400 feet long—at a northern Maine town called Dickey, 10 miles south of the Canadian border. It is located on the St. John River where it joins the Allagash, a river famous for canoeing.

This dam would produce 760,000 kilowatts.

A smaller dam will be located at the site of a former schoolhouse in Lincoln, Maine, about 17 miles downriver. This dam would produce another 34,000 kilowatts.

The project will cost $227 million for dam construction, and an additional $73 million will be needed to transmit power through New England. The job can be completed in 1972 if it receives final congressional approval this session.

Chances look good, despite the heavy opposition from the New England private electric industry.

The industry says the project is a "turkey." By this it means the project is a waste of taxpayer's money. Utilities claim private generation of power with tax-paying facilities can reduce rates by 40 per cent by 1980 and 22 per cent by 1972.

The Federal Reserve Bank of Boston backs up the private utilities' claim that they can

produce power cheaper than the federal government can at Dickey-Lincoln School.

"By 1977 it is expected that peaking power from privately-financed and taxed plants could be delivered to the interconnected systems of southern New England for 15 to 20 per cent less than the comparable peaking power from the federally-financed and tax-exempt Dickey project," wrote John M. Wilkinson, the Federal Reserve Board's economist.

According to U.S. Sen. EDMUND S. MUSKIE, D-Maine, the Dickey-Lincoln project will cut the costs of power in Maine by one-third, and New England average costs by 25 per cent by 1972.

Supporters of the project say it will provide a "federal yardstick"—a means to compare the costs of privately-produced power against the federal kilowatt.

New England is the only region without a federal power project and has the highest power rates in the nation.

The utilities scream "foul-play" when their rates are compared against those of a utility that doesn't pay taxes, saying the consumer has to pay the bill, either in tax support or on the private electricity rate.

But the philosophy behind the government power projects is not only to reduce the cost of electricity.

Another reason is to upgrade the social development of a state or region.

The Interior Department has said that the "benefit-cost ratio" for the Dickey project is 1.86:1.

This means simply that for every dollar the federal government spends, the public will receive $1.86 in benefits.

The growth of the Tennessee Valley since the TVA project is cited as proof.

While the private utilities claim they can do the job better and cheaper, their performance in Maine doesn't prove it.

The Pine Tree State has the highest average monthly light bill in the continental United States, with consumers paying $8.94 for 250 kilowatt-hours. It needs cheaper power to stimulate growth in vast wilderness in the northern part of the state.

The Dickey project would make available to Maine utilities 100,000 kilowatts of firm cheap power and the rest would be available for peaking purposes for the New England region.

Peaking power is used to meet consumer demands when electricity is used the most during the day—usually around suppertime.

Assistant U.S. Interior Secretary Kenneth Holum says Maine municipals and cooperatives, who now buy wholesale power for up to 21 mills per KWH, could buy firm Dickey power for 8 mills.

He said that the city of Calais, Maine, could get rid of its 25-watt bulbs and install better street-lighting.

The Massachusetts municipals have testified before Congress that federally produced power in Maine would cut their wholesale costs by 55 percent.

The State of Maine Nuclear Power Authority and the Yankee-Dixie proposals are two minor skirmishes in the public-vs.-private utility war.

The private utility industry hasn't paid as much attention to these public power proposals as it has the threat of imported Canadian power and the federal project.

However, when these skirmishes become full-scale battles New Englanders can be sure the private utilities will fight.

The Maine nuclear authority envisions building a plant near Rockland on the Maine coast. This facility would produce 1.4 million kilowatts of power at a cost of $28.0 million, including transmission lines.

The power would be available to all utilities at a cost below four mills per kilowatt-hour, according to proponents.

A special legislative committee in Maine is studying the proposal and has hired an independent engineering firm to help assess the idea.

Advocates of the Maine Nuclear Power Authority say their project would produce cheap constant or base load power, and it would complement the Dickey project, which primarily would produce peaking power.

The private utilities have reacted somewhat to the Maine Power Authority idea, because earlier this year they announced one of their "big loop" plants would be located in the same sea coast marketing area as the Authority.

This plant will be a nuclear plant—called Maine-Yankee.

The final public power plan relating to New England is the so-called Yankee-Dixie Power Co.—a billion dollar plan.

The Yankee-Dixie Co. envisions building three generating coal mines of northern Appalachia.

It also calls for the erection of 3,125 miles of heavy transmission lines spanning 22 states.

The idea here is to locate the power generating plants near the source of fuel and thus eliminate transportation cost.

The Yankee-Dixie plan is advocated by the municipal and cooperative power interests. Supporters say power can be generated at a cost of 3.5 to 4 mills per kilowatt-hour—comparable to costs in the Tennessee Valley.

The Vermont Legislative Council is also dabbling with an idea which may benefit the electrical users in the state.

The Council is thinking of either broadening the authority of the Public Service Board or creating a new state agency to serve as a power broker and a "spur of competition for the private utilities."

The idea grew out of a Council study; after the Council rejected Hoff's plan to import Canadian power.

The Vermont General Assembly won't meet until January, 1967, and this subject, like importing Canadian power, will be debated for months.

[From the Rutland (Vt.) Herald, June 25, 1966]

SURVEY OF NEW ENGLAND POWER: SEVERAL AVENUES OF COOPERATION NEEDED—CONSOLIDATION OVERDUE, WITH LESS HAUGHTY ATTITUDE AND MORE LINKS BETWEEN SYSTEMS

(EDITOR'S NOTE.—This is the last in a series of six articles on the New England power picture, drawn from a long study of the situation by the Vermont Press Bureau. It was undertaken because New England's power rates average the highest in the nation. The previous five articles this week have discussed the private power views, the public power views, the claims of governments and the pressures of public opinion and politics. The article below presents some conclusions.)

(By Stephen C. Terry)

MONTPELIER.—Mark Twain once viewed the weather as something everyone talks about but no one does anything about.

New Englanders have been long plagued with the high cost of electricity and for many years little was done to correct the situation.

But times have changed, including the attitudes of the men who run the New England private electric industry.

The "white hope" for utility men and the industry in New England came with the development of the atom as a fuel for making electricity.

Along with the atom came new horizons for the New England householder.

Much of the credit for developing the atom as a low-cost source of fuel belongs to the New England private utility industry.

William Webster, chairman and chief executive of the New England electric system of Boston, is one of the nuclear pioneers.

He has also been instrumental in convincing his fellow utility executives to hitch their future to the atom.

The New England electric industry apparently has followed the advice of Webster because it predicts that all plants built after 1972 will be nuclear fueled—coupled with pumped-storage plants to meet peak hour requirements.

The industry rates an "A" for recognizing the potential of the atom as a device to erase the current disadvantage of being so far away from available fossil fuel reserves.

There are more bright spots on the horizon.

Albert A. Cree, chief exectuive of the Central Vermont Public Service Corp. of Rutland, and Howard J. Cadwell, chief executive of the Western Massachusetts Electric Co. of West Springfield, Mass., are leading a quiet drive within the industry to consolidate operations.

Cadwell has had the more immediate success of the two.

He is credited in the industry for engineering the merger of his company with the Hartford Electric Light Co. and the Connecticut Light & Power Co.

The merger is expected to be completed by the end of the year.

Cree says that by 1980, the 39 separate private utilities in New England will be merged into a one-system utility.

When Cree says that present rates will be reduced by 40 per cent in 1980, he is predicating this reduction on a one-system utility, composed of all of the present 39 companies.

"By then utilities will have to merge into one. You can't have all of these little companies in New England. It just has got to be and therefore I know it will," Cree predicts.

Cadwell agrees with Cree that the utilities will have to merge if rates are to be appreciably reduced, but he isn't as optimistic that a one-system utility will become a reality by 1980.

The Western Massachusetts executive says that a merger will allow the "economies of scale" in administration costs, distribution transmission and generation.

Both Cadwell and Cree feel that if the utilities hadn't abused the holding company laws in the 1920's, New England would probably now have a one-system private utility.

In the 1930's Congress broke up the utility pyramids and ordered the holding companies dissolved or simplified.

This ends the good marks for the New England private utilities.

Much more remains to be done in New England if the consumer can expect his electric bill to be comparable with the national average by 1980, as the Federal Power Commission predicts.

The first and most important thing that both the public and private power interests have to learn that their ideological battle shouldn't interfere with attempts by both camps to work together to lower rates.

The situation in the Northwest is living testimony that you don't have to like someone in order to do business with them.

Nowhere in this country have the private and public power fights been as vicious.

But these fights are kept on the proper battleground, and, as a result, the consumers in the Northwest are enjoying some of the lowest rates in the nation because both private and publicly-financed utilities pool their resources.

They have learned that low rates mean high profits.

A lesson indeed, for New England utilities, public and private.

In the six-states, the two utilities systems are reluctant to cooperate.

Instead of welcoming the possibility of buying cheap hydroelectric power from Canada, the private utilities are, in essence, playing a stalling game and trying to talk the proposal to death.

Public power advocates are so bitter in their fight with the private utilities that they can't see the forest for the trees.

They say their objective is the lowest cost of power possible, but because the private utilities are pushing atomic power so strongly, the public power backers in New England find themselves at times degrading nuclear power.

Public power advocates say the investor-owned industry is too optimistic when it puts a four-mills-per-killowatt-hour price tag on the generation of power by nuclear energy in 1972.

The evidence supporting the private industry's claim of four mills per kwh of power is most persuasive.

The Tennessee Valley Power Authority, the classic example of what government can do when it enters the power industry, is about ready to build a nuclear plant—right smack in the middle of the coal fields.

Some public power utility officials have shown signs that they want at least to bury the ideological hatchet as they have approached the private utilities for inclusion in the "big eleven power loop."

So far their efforts have been met with hostile stares.

Other areas both private and public utilities need to exploit is creating more ties of transmission systems and single-area dispatching.

Inter-ties and single-area dispatching would permit all utilities in New England, regardless of size and philosophic bent, to serve each other and help each other in emergencies.

The speedy retirement of old plants should be another goal of the public and private utilities in New England.

But also important, the industry needs to form committees, composed of both public and private utility representatives, for an exchange of ideas.

Communication has been somewhat stimulated between the two groups by Gov. Philip H. Hoff, in his role as a New England Governors Conference committee of one, seeking low-cost sources of power.

But there are problems in bringing the two utility camps together on the same tenting ground.

The most immediate problem is among the private utility executives themselves.

There are generally two types of utility executives in New England.

One type, characterized by Caldwell, is inclined to look at problems with a progressive eye.

The other faction, symbolized by Charles F. Avila, president and general manager of the Boston Edison Co., are the traditionalists.

The first reaction of these utility executives to Canadian power, for example, was simply a close-minded "nothing doing."

Writing in the "Public Utilities Fortnightly," a publication of the electrical industry, Avila is very critical of Hoff's attempt to import Canadian power.

He labeled it, in essence "a slick appeal" that attempted to make utility officials "rush to Montpelier, checkbooks in hand, to get all they can of this bargain electricity."

However, Cadwell and utility officials who think like him, will at least listen to a reasonable argument and then make a decision.

While some utility officials are talking in terms of merging by 1980, the fact remains that the New England electric companies will be building 700 miles of extra high voltage transmission lines in the next six years and the project is being done on an individual basis.

If the utilities mean what they say about pooling resources, they would form a common transmission company to build the lines for the "Big Eleven Power Loop."

There is also some justification for a demand that state regulatory agencies should be reviewing their policies regarding New England utilities.

Perhaps the regulatory bodies should be insisting that New England utilities ought to consolidate and be taking advantage of the "economies of scale" that Cadwell talks about. This is really the only way rates are going to be lowered.

To the New England consumer, the regulatory agency (in Vermont it is the Public Service Board) is his only protection against high rates.

The utilities in New England have a duty to lower their high rates and put New England electrically on par with the rest of the nation.

The customer should demand this from his utility.

Utilities are allowed to operate as natural monopoly.

In return for this exclusive right, the utility doesn't face normal risks like other competing businesses.

The utilities owe each and every consumer the best service and the lowest rates possible.

All you owe "Reddy Kilowatt" is your monthly light bill.

U.S. COAST AND GEODETIC SURVEY

Mr. BARTLETT. Mr. President, on July 13 of this year at the old Navy Yard here in Washington there was commissioned the largest and finest oceanographic ship ever built in the United States, the U.S. Coast and Geodetic Survey ship *Oceanographer*. The President was the main speaker, and he spoke forcefully of the challenge which the sea presents to this generation for the betterment of mankind. I included his remarks in the RECORD at the time not only because of the importance of the new ship to our national oceanographic effort, but also because of the warm spot I have in my heart for the Coast and Geodetic Survey itself.

The recent commissioning was timed to coincide with the first anniversary of ESSA, the Environmental Science Services Administration, of the Department of Commerce, which was created from the Coast and Geodetic Survey, the Weather Bureau, and the Central Radio Laboratory of the National Bureau of Standards. This new administration is functionally organized to permit a more logical approach to understanding the dynamics of our total environment, from the center of the earth to outer space, and to permit a better coordination of interface studies between land, atmosphere, and sea. The Coast and Geodetic Survey brought considerable talent and tradition to ESSA, and I look forward to the vital role it can play in this new setting.

Many people have had an opportunity to visit the *Oceanographer*—more than 7,000, in fact—and to learn something of its capabilities and its intended use. Many others have met the ship through television and press coverage. Hopefully, this exposure will swell the rising tide of national concern that we hasten to develop our knowledge of the oceans—knowledge that is essential if we are to fully utilize the abuandant resources of the sea, knowledge that in time will mean our very survival on the mere 29 percent of the earth that is not covered by the sea.

In Alaska, where even today more than half our land is farther than 100 miles from a highway, we have grown up with the Coast Survey. Their nautical charts have opened up our waterways and offered protection to our fishing fleets and our waterborne commerce, and their aeronautical charts have meant life as well as livelihood for thousands of Alaskans who have known the airplane as their sole means of transportation. Their survey parties have visited our most remote areas and set benchmarks on our highest peaks. They have walked the length of the Alaska Highway; they have followed the meanders of the Yukon; and they have crossed the Arctic tundra by dog sled. In their often lonely work they have visited almost every island along our 34,000 miles of coastline, and they have passed through almost every town and village. Their survey markers remain as mute evidence of their passage and provide landmarks to all who follow and need to know literally where in the world they are.

The Coast and Geodetic Survey has a long and honored history on land and at sea, but today, Mr. President, I want to emphasize the role it has played for 159 years in providing this great Nation—and the world—basic knowledge of the seas essential for commerce and essential as the scientific foundation on which much of the present surge of oceanographic research will be based. Thus, with your indulgence, Mr. President, I would like to place the commissioning of this great ship, the *Oceanographer*, in the proper historical perspective. I would like, too, to point out how this ship and the Coast and Geodetic Survey which operates her fit into the present and planned U.S. program in oceanography.

Early efforts of the survey of the coast, as it was first known, were under the able direction of the Swiss geodesist Ferdinand Rudolph Hassler, named as the survey's first Superintendent by President Jefferson on the recommendation of the learned scientists of the American Philosophical Society. After the first triangulation surveys in the New York, Long Island, and Connecticut areas were completed in 1834, nautical charting surveys were started immediately in late 1834 and early 1835 from the schooner *Jersey* under the command of T. R. Gedney and the schooner *Experiment* under George Blake. Early work covered the south shore of Long Island and New York Harbor and included discovery of a previously unknown channel leading into New York Harbor from the southeast and named Gedney Channel after the skipper of the *Jersey*.

But these early surveys of the Coast Survey were also scientific surveys and would have been called oceanography had the word then been in use. The 1845 observations off Block Island and the July and August 1846 Gulf Stream observations by George M. Bache from the brig

Washington produced what are still believed to be the first observations of water temperature versus depth in the Gulf Stream. Bache's vertical temperature traces seaward of Sandy Hook showed maximum temperatures of 82 degrees at the surface, dropping to 37 degrees at a depth of 1,500 fathoms. And this, you must remember, was done in 1846. The 1853 map of the Gulf Stream surface temperatures from Cape Canaveral—as it was then called—to Block Island was followed in 1863 by sheet II of the Atlantic coast series, Cape Hatteras to Nantucket, which showed the position of the "cold wall" along the landward side of the Gulf Stream as well as the main axis of the stream and the various other axes of flows of water of different temperatures. This work was accomplished under a great scientist and a great Superintendent of the Coast Survey, Alexander Dallas Bache, a grandson of Benjamin Franklin. These early scientific efforts were not without hazard. In 1846 on the way back to port from her Gulf Stream observations, the brig *Washington* was caught in a violent hurricane off Cape Hatteras. The ship was again and again washed over by monstrous waves, and Captain Bache, brother of the Superintendent, and 10 of his men were lost. The ship, badly damaged, drifted for more than a week and was finally taken in tow by the U.S. frigate *Constitution*.

In the late 1860's the Gulf Stream work, interrupted by the Civil War, was resumed. Mitchell and Pourtales worked from the steamer *Bibb* in the Florida Straits, John Elliott Pillsbury worked from the *Blake*, and Chester and Freemont worked from the *Drift*. From 1885 to 1889 the classic work of Pillsbury from the steamer *Blake* was carried out in the Gulf Stream. His observations of the currents and temperature at depth in the stream made while the *Blake* was actually anchored in the deep Gulf Stream still remain as one of the classic studies of physical oceanography.

In 1871 the then Superintendent, Benjamin Peirce, a professor of astronomy and mathematics at Harvard, asked the famous Swiss geologist Louis Agassiz if he would like to be aboard the Coast Survey's iron steamer *Hassler* when she was sent around Cape Horn to California. Elizabeth Carey Agassiz, his wife and founder of Radcliffe College accompanied him as did the Count de Pourtales, an early oceanographer who came to the Coast Survey in 1848 and who was an expert on deep sea dredging. The expedition sent back to the United States over 250 barrels and cases of specimens, including 30,000 fish specimens.

The 1877 through 1880 work of the Coast Survey steamer *Blake* is wonderfully chronicled in the two-volume study by Agassiz' son Alexander, called "Three Cruises of the U.S. Coast and Geodetic Survey Steamer *Blake*" published in 1888. These volumes describe in detail the results of the biological and geological dredgings, and his studies of the Florida reefs still remain as a classic in the field.

Tidal studies, current studies, dredgings, nautical charting, bottom sampling, development of oceanographic equipment, all these were the work of the Coast Survey. With the purchase of Alaska from Russia in 1867, there were added some 34,000 miles of coastline to be surveyed and mapped. The great George Davidson was doing reconnaissance work from the cutter *Lincoln* in Alaskan waters, and early Alaska Pilots—sailing directions and coastal descriptions for the waters of Alaska—were prepared by him and published by the Coast Survey as early as 1869.

The history of this Federal bureau at sea is a glorious history, and it is inextricably entwined with and a fundamental part of the great history of marine science in the United States. I would hope that some day this history can be written and published so that this facet of man's continuing struggle with his environment, this great part of the history of U.S. science at sea, will be known to all who follow and who will of necessity base much of their own work on the work of such men as Hassler, Bache, Agassiz, Pourtales, Davidson, Pillsbury, and the rest.

But where does the work of the Coast and Geodetic Survey fit today into the overall picture of the Federal effort in oceanography? This bureau is still in the forefront—as the recent commissioning of the *Oceanographer* attests. With the adoption of the International Convention on the Continental Shelf, the United States obtained "sovereign rights" over the resources of the U.S. Continental Shelf, an area of some 850,000 square miles, of which over two-thirds lie off the coasts of Alaska. To the Coast and Geodetic Survey falls the task of compiling the maps and charts of this area. To them also, through their parent organization, ESSA, falls the task of operating the ships that must do the work, of operating the tide gages that tell of the rise and fall of the sea, of running the seismic seawave warning system that will warn of the impending arrival of the so-called tidal waves generated by submarine earthquakes. Much of the oceanographic research work formerly carried out by the Coast Survey as been transferred to a sister agency within the ESSA, the Institute for Oceanography established only last December. The Institute working closely with the Coast and Geodetic Survey plans to continue the research work at sea necessary for the environmental understanding on which must be based the scientific services which the Environmental Science Services Administration provides.

Working with other Federal agencies and with universities and research institutions, the Coast and Geodetic Survey and the Institute for Oceanography are even now in the final stages of a year-long comprehensive study of the Gulf Stream—carrying on the tradition of George Bache, Alexander Dallas Bache, and John Elliott Pillsbury in the last century. Now, however, the work is being done with towed thermisters, with modern winches and sampling and analytical equipment, with aircraft with infrared sensors, with telemetering tide gages, buoy-supported and bottom-mounted current meters, and tethered balloons for determing the important meteorological factors in the air above the Gulf Stream.

As recently as this past June, this study showed that a great looping meander of the Gulf Stream had swung as far north as Georges Bank off Cape Cod bringing warm water to an area usually bathed by the cooler waters of the Labrador Current from the north. There will certainly be some deleterious effects on the larval stages of commercial fish which are sensitive to such temperature changes, and the Bureau of Commercial Fisheries—operating on information supplied by the Coast and Geodetic Survey ship *Whiting*—is studying the biology of the area to ascertain what these effects might be. Meteorologists and oceanographers working together in the Sea-Air Interaction Laboratory and the Physical Oceanography Laboratory of the Institute for Oceanography are studying both the results of the survey of the Gulf Stream and of the overlying air masses.

In the northeast Pacific, south of the Aleutian Islands of Alaska, personnel of the Coast and Geodetic Survey and the Institute for Oceanography are even today working together on the ship *Surveyor* carrying on the work of Operation Seamap, which stands for scientific exploration and mapping program. This program is the first attempt by any nation to undertake detailed topographic, geophysical, and oceanographic surveys of a large area of the deep sea. It was the research on the data from these pioneering surveys that recently revealed a new major fracture zone in the North Pacific and enabled marine geologists from the Institute for Oceanography to show that these zones in the North Pacific are areas where lateral displacements in the basic crust of the earth have been as much as 552 miles.

It was these Seamap surveys, too, coupled with the closely spaced nautical charting surveys of the Coast and Geodetic Survey that provided the wealth of information used to compile the magnificent new bathymetric map of the Aleutian arc now in the final stages of publication at the Coast and Geodetic Survey. This map, some 6 by 18 feet, is made up of six sheets which at a scale of 1 to 400,000 show in great detail the intricate bottom topography of the great Aleutian area of Alaska including the long arcuate Aleutian trench. This map will be invaluable to all those concerned with the marine resources of Alaska as well as those marine scientists, geologists, geophysicists, and geographers concerned with this great arc and the theories of its formation.

Tidal and sea-level studies and their application to coastal engineering problems, offshore currents and their relation to fishing and commerce, the intricate interactions between the sea and the atmosphere and their relationship to long-range weather forecasting, nautical charting for commerce and navigation, studies of estuaries as complete environmental units for their importance to man who tends to cluster his cities around them, and basic understanding of the geology of the sea in all its forms—these are the continuing oceanographic tasks of the Coast and Geodetic Survey and

the Institute for Oceanography. These and their other marine-oriented activities are all aimed at providing the United States with the basic description and understanding of the ocean and its various boundaries, the understanding that is absolutely essential if we are to use and exploit the seas for the general betterment and economic well-being of mankind.

The commissioning of the U.S. Coast and Geodetic Survey ship *Oceanographer* on July 13 is just one more step in the long history of the Coast and Geodetic Survey's continuing mission to learn about the sea. To Admiral Tison, Director of the Coast and Geodetic Survey which operates the *Oceanographer*; to Captain Wardwell, her commanding officer who will direct her work; to Dr. Stewart, Director of the Institute for Oceanography which will plan the scientific phases of her work; and to all the officers, men, and scientists who will serve and work aboard her throughout her lifetime, I wish fair winds, smooth sailing and good science—and I envy them their great opportunity to improve the lot of mankind so directly by helping in the monumental task of understanding the ocean.

MORE JOBS IN INDIANA

Mr. HARTKE. Mr. President, we are all aware of the critical shortage of freight cars among the Nation's rail carriers, a fact substantiated by the Interstate Commerce Commission.

I am happy to note that today the Pullman-Standard plant in Hammond, Ind., is resuming the construction of freight cars for the first time in 29 years. The Hammond shops have been used as repair facilities, employing some 600 persons. With the resumption of freight car assembly operations today, an additional 200 jobs have been created. This has been made possible not only because of the market for freight-carrying rail cars, but also because the manufacturer had no artificial restrictions placed upon his ability to finance his expansion.

We have here, in microcosm, a basic lesson in economics. If we avoid artificial restraints and allow free interchange in the marketplace, the supply of goods and services will keep pace with demand and act as its own brake on inflation.

MILITARY POWER: THE LIMITS OF PERSUASION

Mr. GRUENING. Mr. President, it is now several months since Lt. Gen. James M. Gavin, U.S. Army, retired, appeared before the Senate Foreign Relations Committee and gave his impressive testimony for a limitation of our undeclared war in Vietnam.

That war has now been steadily escalated. Our casualties have increased, passing 4,500 American lives lost in combat and 25,000 wounded, some crippled for life, and the costs nearing $2 billion a month, with serious adverse effects on our domestic economy and on the fine programs which President Johnson and the first session of the 89th Congress enacted.

The escalation that has gone on unremittingly with no appreciable results except more deaths, more slaughter, more victims, more destruction, more erosion of our domestic needs, is the subject of a pertinent and thoughtful analysis by General Gavin in the July 30 issue of the Saturday Review. It may be considered an updating of General Gavin's views. They may be summed up in the increasingly self-evident conclusion that force does not, and will not, solve the tragic dilemma brought about by our military involvement in southeast Asia. I ask unanimous consent that General Gavin's article, "Military Power: The Limits of Persuasion," be printed at this point in my remarks.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

[From Saturday Review, July 30, 1966]

MILITARY POWER: THE LIMITS OF PERSUASION—ECONOMIC STRENGTH AND TECHNOLOGICAL CHANGE, NOT WAR, NOW HAVE THE GREATEST IMPACT ON FOREIGN AFFAIRS

(By James M. Gavin, lieutenant general, USA, retired)

Since the beginning of time power has been used to persuade. Yet, paradoxically, at a time when we possess more power than any nation on earth, we are not very persuasive. It is frustrating and baffling, and public debate on the use of power in Vietnam rages throughout the land. Perhaps it would be well to examine the nature of our power and, more important, its changing character since World War II.

Usually we think of power in terms of military power—military weapons systems—and most of us have long considered these to be the primary source of power in world affairs. Of course, to exist, military power must have a base of economic support. In all past experience only a society that had the natural resources and, in addition, the inventiveness and industries to produce modern weapons systems, could bring them to combat and thus gain a decision in international conflict. Hence, from history we are inclined to think of military power as the dominant force, and the economic power which supports it as a secondary source of military strength.

History is replete with examples of aggressor nations adding to their total power by taking from others. In an excellent and comprehensive volume, *Power*, written in the 1930s, Bertrand Russell expressed it this way, "Economic power, unlike military power, is not primary but derivative." He then went on to illustrate how military power had been used to seize vast colonial empires from which great wealth could be extracted; wealth in minerals, oils, and arable lands, for example. Hence, the nation that could seize the most resources could, in the long run, develop the most powerful military forces.

I believe that there is a fundamental change taking place, and indeed it has taken place, in this relationship between military and economic power. Fundamentally, today technology can, if wisely directed, provide adequate resources for humans to live comfortably on this earth. At the same time, technology can, if so exploited, provide the weapons systems to destroy a major portion of the human race. Finally, technology is having, and will continue to have, such a tremendous impact on world affairs that it is changing the balance between economics and military power significantly. It is this change that I would like to examine.

First, let me call attention to the talk given by our Secretary of Defense in Montreal on May 18. He referred to the sources of unrest and discontent around the world, and emphasized that security is not military hardware; security means economic development. In fact, he stated flatly that, in his opinion, the concept that military hardware is the exclusive or even the primary ingredient of permanent peace in the mid-twentieth century is absurd.

During the past twenty years I have been closely associated with the use of military power, the planning and execution of national military policy, and, to a lesser extent, the conduct of foreign policy. To say that it has been an extremely active environment is an understatement, for we never have had such amounts of power available nor have we had so many problems associated with its use. And never has there been such widespread interest in our many commitments and involvements abroad, nor so much social turbulence at home.

Having been in the vortex of much of the discussion, I find it deeply disturbing that we have *yet* to get to the heart of the matter. To do so we must understand, and articulate, in much clearer terms than we have so far, our total *diplomatic* and *political* power, for this is the power that persuades: the economic, technological, and military components of such power. Part of this examination will be a consideration of the role that each of these will play in our national strategy.

Actually, we have been doing very well in the realm of economics and technology, especially during the past decade. It is in the area of applied military power, tactical military power, that most of the misunderstandings and frustrations seem to exist. In order to understand their cause, therefore, I believe that we should begin with an examination of the meaning of the most significant military event of our time—the detonation of the first nuclear weapon.

The shock waves from the Hiroshima blast went far beyond those predicted by the nuclear physicists. Nothing in our country's history has had a comparable impact upon foreign policy and military affairs. Governments have fallen, coalitions of nations have been formed and reformed to cope with the problems caused by the bomb's existence. The bomb was at the heart of De Gaulle's rejection of Great Britain's desire to join the European Common Market. The bomb was ever present in the mind of President Kennedy and his advisors at the time of the Cuban missile crisis. The bomb today casts a long shadow over all discussions on the future of NATO. For the fundamental nature of military power changed significantly with the advent of the bomb.

Few realized in 1945 that the bomb was the beginning of the end, if not indeed the very end, of man's search for energy to be used as military force. The more prevalent view was that a new era was born—the age of atomic force. Now, twenty years later, we understand better the place of the bomb in the spectrum of history. It was the end, not the beginning of an era. It was the end of man's search for force and it marked a beginning of a new quest—the search to find new ways and means of influencing the behavior of other humans. It was to be the age when the earth would shrink rapidly due to high speed air travel, space exploration, satellite communications, and rapid data processing systems, for example. More and more the nations of the earth were to consider themselves part of one large world community; the logical end of an evolutionary process that began many thousands of years ago with the family, tribal, and city-state, and later, national groupings.

Furthermore, in the armed forces the physical effects of the bomb alone made plain for all to see that all the boundaries between the traditional areas of combat, land, sea, and air, were wiped out. The earth was

soon to become one theater of operations, shrunken to such small size that no area was immune from attack from any other point on the globe. And when, in the traditional manner, our military recalled its own experience for answers to deal with the new problems of the day, it did not find them. For the answers were not to be found in a remembrance of things past, they could be found only in a thoughtful analysis of the future, in a profound search for the meaning of the period that we were about to enter. The classical military formula of escalating power until total victory would be achieved was to become absolutely meaningless. For wars, if there were to be wars, and the means that would resolve them, were going to be many orders of magnitude different from what they had been in the past.

In 1950, five years after the end of World War II and Hiroshima, Soviet-equipped North Koreans invaded South Korea. It was a costly experience for us. Possessing the most powerful military establishment in the world, well-equipped with nuclear weapons, we suffered more than 140,000 casualties and had to accept terms less than victory. Yet, despite the Korean experience our national strategic policy in the mid-Fifties was still based on massive retaliation. Admittedly there was much argument and discussion about the validity of this view. Indeed, our Promethean achievement seemed to have left us in intellectual disarray.

But from the mid-Fifties on, our total power seemed to paralyze our intellectual processes, and our response to challenges of lesser magnitude than total war were of a diminishing degree of credibility. This was because a number of myths prevailed in our thinking, and they stemmed from a tendency to look inward to our exeprience rather than to postulate technology and political trends into the rather clouded and hazardous unknown of the future.

The first myth is that war is a continuation of politics by other means. This Clausewitzion orthodoxy holds that wars will be fought and won, and sufficient power will be applied until they are won. Then war will be followed by peace, a period in which politics as usual will be the preoccupation of the world powers. This, in turn, very likely will be followed by a period of war, and the difference between the two will be quite discernible. I believe that by now most of us realize that this no longer is true.

In his recent Montreal speech, our Secretary of Defense discussed conflicts of recent years and pointed out that in the past eight years "there have been no less than 164 internationally significant outbreaks of violence, each of them specifically designed as a serious challenge to the authority, or the very existence, of the government in question . . . And not a single one of the 164 conflcts has been a formally declared war." From this experience, realistically, we must conclude that wars will not always be declared and that nations will not always commit their total resources to win in every confrontation. There will be wars that are not wars, if defined in terms of our experience before Hiroshima. In fact, for some nations it may be wiser to keep a shooting war limited and undeclared while pursuing national goals by other means, never admitting the existence of a war nor indeed a desire to bring it to an end.

The second myth is that if you destroy enough people and enough property you will overcome an enemy's will to resist. A corollary to this is that a nation should use as much force as necessary to win, since in war there is no substitute for victory. Actually, the nature of conflict being what it is, and the danger of a nuclear holocaust being ever present, it is compelling that solutions less than total war be found. The indiscriminate use of power has been further complicated by modern communications media that now bring more and more detailed information about the conduct of war into every home. The inevitable, and needless, loss of civilian lives has become the subject of concern to more than just the contending military forces.

Thus, sensitivity to public opinion has made it necessary to consider restricting attacks to military targets whenever this is possible. Unless, of course, the nation's goal is to seek total war.

A third aspect of existing military thinking deserves mention. The thought still persists in many minds that the ultimate in sophistication and usefulness in weapons systems is the high-yield megaton bomb delivered by missile or aircraft. By its very nature it is believed that it should be able to cope with almost any threat to our survival. The fact is that it is the very effectiveness of our strategic air force, and the overwhelming, devastating potential of H-weapons, that prevents their employment in a conflict other than total war. And again, it is the devastation that would be caused by the use of these weapons by the strategic air arm that has given tremendous emphasis to the role of the other Services; those that have it in their ability to apply power with discrimination, flexibility, and restraint. It is this possbility of devastation that gives great emphasis to the need to find and understand the uses of other forms of power stemming from our science and technological programs and our great economic strength.

The changing nature of conflict today makes it imperative that we develop better means of dealing with limited wars, guerrilla wars, and other types of conflicts that we cannot yet anticipate with accuracy but which will not be total war. Studies in these areas will require great effort not only in anticipation and planning, but in research and development as well.

Until World War II, we were protected by a shield of time and space. And while we were enjoying that protection, Hitler's forces ravaged Europe and, more important, his scientists developed the first surface-to-surface rockets, surface-to-air rocket, air-to-air rockets, the snorkel submarine, the first jet plane and the first rocket plane, nerve gas, etc. And he came close to developing the atomic bomb. After we entered the war, and finally overran his concentration camps, we found the gas ovens being enlarged—and he had already destroyed more than 6,000,000 human beings. Today we no longer enjoy the advantage of time and space. Our armed forces must be ready for every challenge that confronts our nation regardless of how sophisticated the weapon or the technology from which it springs. This will require a continuing expenditure of our national resources if we are to achieve an adequate state of readiness for every reasonable challenge. And this, in turn, necessitates a dynamic, imaginative, productive economy.

How good is our economy?

Most people will remember that after World War II the Soviets anticipated an economic collapse of the West, believing that our economy was entirley a war-based one. What we have accomplished has been truly remarkable, and during the past twenty years our economy at home has expanded at a tremendous rate. It is vital that we sustain this growth.

In 1966 our Gross National Product will be in excess of $700 billion. Our industry is doing very well. During the decade beginning in 1955 combined annual sales of the 500 largest industrial corporations increased by $100 billion (from $161 billion to $266 billion). Corporate profits last year before taxes were $73 billion, an increase of $9 billion over the previous year. Per-capita income reached $2,700 last year, a 6 per cent increase over 1964 income. Personal income was a record high of $528 billion, up $35 billion over the previous year.

These are impressive statistics. We should have no apprehension whatsoever about the outcome of any competition with the Communist countries in the realm of economics. Our apprehension, if any, should be concerned with whether or not we use our resources wisely and well: to provide a good society at home, to aid the emerging young nations abroad, while at the same time we provide our armed forces with weapons systems adequate to meet the broad spectrum of challenges that will confront us. We must give serious attention to the problems of exporting our economy abroad.

One of the most remarkable and farsighted programs ever undertaken by any country was the inauguration of our foreign assistance program in 1949. Through it, we were able to provide economic assistance, wherever it could be properly used to the newly emerging nations as well as to many of the older powers. In 1949, this program amounted to a little over $4.5 billion and was 1.75 per cent of our Gross National Product. It has been overwhelmingly successful, and today South Korea, Taiwan, and Indonesia, for example, all are monuments to the achievements of this program. In addition, a country geographically almost a part of the Eastern bloc, Yugoslavia, was able to achieve economic prosperity and retain its political independence from Moscow.

Our foreign aid program has been overwhelmingly successful in areas where the Communists can least afford to have us succeed. In areas where they would like to accuse us of colonialism and, indeed do accuse us of economic colonialism today, we have been able in many countries to help achieve an unprecedented standard of living, far superior to anything that the Communists could offer. This has been accomplished despite the fact that we have steadily reduced the amount of foreign aid until today, in 1966, it is but .48 per cent of our Gross National Product, compared to 1.75 per cent at its inception in the late 1940s.

There is an old combat maxim that one should reinforce success; this we are not doing. In speaking at the Boston University commencement exercises in June of this year, Lady Barbara Ward Jackson recommended that the "have" nations such as the United States, contribute 1 per cent of their Gross National Product to help the underprivileged and underdeveloped countries. Some attribute our unwillingness to do so to the cost of the Vietnam war. If so, this at least raises the question of whether or not we may now be following a course inimical to our long-term strategic interests.

Another area in which Americans have achieved great success has been in the exportation of products and business know-how. Our exports, which amounted to approximately $37 billion in 1950, have grown to well in excess of $100 billion in the mid-Sixties. Our direct investment abroad has increased from $25 billion to $50 billion in the same period of time. In addition to this direct investment, we have indirectly invested $20 billion through stocks and portfolio holdings. Our direct investment abroad is now increasing at an average of more than $10,000,000 a day. With this investment we have exported entrepreneurial skills and management techniques that have proven to be very attractive to the Western world. So successful has this been that the return on our investments abroad today amounts to $4 billion annually.

This has all been possible because of a burgeoning economy at home and the aggressive drive of our businessmen to find markets and business opportunities abroad. At the same time, businessmen have sought to raise the standards of living wherever they have marketed their products and services. In this they have been by and large, very successful. There is nothing that the Communists have done, or so far can do, that

can compare with this. It is with great uneasiness, therefore, that thoughtful businessmen consider restrictions on the flow of dollars overseas. For the export of our entrepreneurial skills and products has been one of the most successful undertakings of foreign affairs in the history of our country, and the most productive of good in our confrontation with the Communist bloc. No tactical conflict, whether it be undeclared war or not, should be allowed to expand at their expense.

Maintenance of our position in the world community is based not only on those programs that we export abroad, but also on the kind of a society we have at home. World opinion will be formed by not only the prosperity and higher standard of living that we can help other nations achieve, but also by what the world knows that we are able to do in our own soicety. Through our ability to manage our own internal affairs, we export an image of America and of our way of life. And in this area there is much to be done.

We have made progress in dealing with some of the problems of the aged and of the very young, but, in my opinion, we have not yet begun to deal adequately with the problems of the teenagers and the near teenagers. We must completely revitalize our educational system by bringing together the vast industrial, scientific, and technological resources of this country with our educators, to the end that we can significantly improve the education and technical training of our young. In addition, we must provide opportunities for those out of school for some time to return to educational centers to update their knowledge and to learn new skills.

Equally as important as directing the intellectual energies of our young people into useful channels is the problem of helping them to develop their physical talents. Very few countries do not have national amateur sports programs assisted and guided by a national council; the United States is one of them. It was the hope of our late President, John F. Kennedy, that some day every boy and girl, regardless of race or economic background, would be given an opportunity to achieve excellence in competitive amateur sports. President Johnson directed a study to this end some time ago, and, it is hoped, a program will be under way this year. The solution of this problem is intimately related to the problems typified by Watts.

Now, what does this discussion on the relationship between military power and economic programs mean when applied to problems of today? What, for example, does it mean in terms of Vietnam?

I think that we would all agree that we should not be in the predicament that we are in in Vietnam, but the fact is that we are there. The problem now is to handle our resources—men, weapons, aircraft, etc.—in such a manner as to neither impair our strategic efforts in other areas nor our tactical prospects in future conflicts. The cost of the Vietnamese involvement now is on the order of $16 to $18 billion a year. This has already made it necessary for us to curtail the flow of dollars overseas. We have also continued to cut back on our foreign aid programs. Our domestic economy is beginning to show the impact of the Vietnam struggle.

Obviously, we have reached the point where further escalation could seriously impair our strategic commitments—our exportation of capital and management skills, our foreign aid programs, and our science and technology programs—and our social programs at home. Perhaps we have passed this point. Furthermore, we should anticipate and be ready for a very serious struggle for Thailand and the Kra Peninsula. And if our involvement plunges us deeper into war in Southeast Asia, we should be prepared for a reopening of the Korean front. It is important, therefore, that we accelerate the measures to bring the Vietnam situation under control. Certainly, we should not willingly allow it to escalate.

For example, our present position in Vietnam is based upon the need to defeat the North Vietnamese aggressors who have carried their attack into South Vietnam. What is the nature of the aggressor's forces coming from North Vietnam, in weapons, size of forces, and current rate of buildup? Are they as numerous and as well equipped as we allege? It seems to me that answers to these questions should be obtained as a matter of highest priority.

One of the outcomes of the 1954 Geneva Conference was the establishment of an International Control Commission. This Commission should be abundantly equipped with helicopters, fixed-wing aircraft, and up-to-date communications equipment if it is to do its job. The staff supporting it should also be increased until it is capable of carrying out its intended task. It is not capable of doing this today. If we were to spend but a small part of what we are expending in combatting the North Vietnamese to determine with accuracy the nature and composition of their forces, we could probably make a significant contribution to the ultimate resolution of the problem. Concurrently with this improvement in the capability of the International Control Commission, we should ask for a reopening of the 1954 Geneva meeting to determine if other measures can be taken to bring the situation under control, and hopefully find a formula for resolving the conflict.

High on the list of national priorities must be the restoration of stability within the Atlantic Alliance. We have insisted for too long on maintaining the status quo in NATO, ignoring the powerful trend toward Europeanism and the towering strength of the European Common Market. Profound changes have taken place in Europe since NATO was originally established, and our policy does not reflect an awareness of these changes. At times we seem more preoccupied with isolating de Gaulle than with making positive proposals to which our European allies could adhere.

The most significant change that has taken place has been the growth of the European Common Market. Although conceived as an economic organization, it is rapidly assuming all aspects of a powerful military and political bloc. Purists will argue this point, pointing out that the Fouchet Mission to Brussels of five years ago failed in its efforts to have the members of the Common Market agree on a commonality of political, military, and cultural objectives. But the fact is that the European Common Market represents growing political and military strength. The need, therefore, is for a recognition of this within the structure of the Atlantic Alliance.

There are those who fear such a Europe as a third power, but now is not the time for such fear; it is a time for an understanding of Europe as a strong partner. Furthermore, Great Britain is part of Europe and must play a significant role in the affairs of Europe. Our reaction to de Gaulle's withdrawal of his armed forces from NATO has been to orient our attention more toward Germany as the leading power on the Continent. This policy has in it the seeds of disaster, for a German-dominated Europe would never be accepted by our allies and would be bitterly opposed by the U.S.S.R. and its satellites. A Europe without Great Britain's participation in its economic and political affairs will be an unending source of irritation and trouble for us. It is imperative, therefore, that we assist in any way that we can Great Britain's entry into the Common Market.

This should begin with an understanding on our part of the need for Great Britain to sever her special nuclear relationship with us, and for her to enter into frank discussions on the problems of nuclear weapons and the Common Market area. Based upon numerous conversations that I have had with responsible members of the de Gaulle government, including the General himself, I am convinced that Great Britain would be welcomed into the Common Market if she were willing to come in, bombs and all, and meet all the provisions of the Rome Treaty. Among other things, this will require a minimum period for the transition of the Commonwealth nations out of their special relationship to the U.K. economy.

As the strength of Europe increases, the need for U.S. military forces on the Continent will diminish. Our present commitment it based more on diplomatic than military need. A significant reduction of our troop strength, in my opinion, would improve our economic situation worldwide and thus add to our global strategic strength without increasing the military risk in Europe.

General de Gaulle's recent visit to the U.S.S.R. was a remarkable *tour de force*. Although generally denigrated in the American press, the General's achievements were noteworthy. There were many who remembered that the General had written in his memoirs, published in 1959, that it was his intent to insure the security of France by making arrangements with either the East or the West; hence, there was concern lest he enter into a conventional military pact following the withdrawal of French forces from NATO. On the other hand, many recalled how bitterly he opposed negotiations with the Soviets following Khrushchev's threat to the Berlin Corridor in late 1961. He had said at that time that he would refuse to enter into any "negotiations" since we were there by right and to agree to negotiate would suggest to the Soviets an intent on our part to give something away that was rightfully ours.

The remarkable thing about his trip, therefore, was that he so skillfully avoided leaving any impressions that he was negotiating over West Germany, despite the desire of the Soviets to talk about European "security." At the same time he was able also to finesse Soviet suggestions of the need to discuss recognition of East Germany. On the positive side, agreements were reached on technological, cultural, and scientific exchanges. Since current French economic trade with the Soviet bloc is going quite well, the total package represents significant achievement. The ultimate outcome of his visit, therefore, could have profound military significance.

For some years the United States has exchanged visits of artists, athletes, and academicians as part of a program that had as it goal the relaxation of tension between the United States and the U.S.S.R. The time now has come to encourage the visits of businessmen between both countries, and to encourage our trade with the U.S.S.R. and its satellites. To an increasing extent, the profit motive is playing a significant role in the Soviet economy, and the Soviets are trading extensively with our Allies. Our President, in his State of the Union Message this year, urged Congress to pass the necessary legislation to enable us to get on with an increased trade. This should be done without delay, for increased trade will not only reduce tension, but will increase the standard of living and improve the social and economic prospects of people wherever the trading is done.

Conspicuous by its absence from this discussion is the problem of the unification of Germany. It should be absent, for until

economic and political relations between Western Europe and the Soviet bloc are improved, there is little prospect of finding an acceptable reunification formula.

In the past two decades, the world has changed from a community of many independent nations, frequently remote from one another, to one small world community. It will look with great apprehension on any indiscriminate use of military power. In the meantime, from an unprecedented abundance of scientific and technological knowledge, man has acquired the potential for tremendous good and tremendous harm. This new knowledge must be channeled into the areas where the greatest good for the most can be realized; to help our Great Society at home and to help the emerging nations abroad. The most influential force in world affairs today is the economy of the United States. It should be sustained and enriched as a matter of sound strategic policy.

Tactical engagements that do occur should not be permitted to grow as uncontrollably as a malignant cancer. Fighting will certainly occur, from time to time, at any point along the abrasive interface between the Communist nations and the Free World. Our power must be used to persuade those who seek to improve their position through aggressive attacks upon their neighbors that they will be deterred and cannot possibly succeed. Concurrently, we should make clear our intention and ability to maintain a dominant position in global affairs. Our global power must be exercised with restraint and wisdom. At a time of Great Britain's greatness, Disraeli said, "All power is a trust—and we are accountable for its exercise." Now, we too are accountable, not only to the American people but to people of the world community of nations.

DEATH OF FORMER SENATOR HAZEL ABEL

Mr. HRUSKA. Mr. President, the death on Saturday of one of our former colleagues, Mrs. Hazel Abel, of Lincoln, Nebr., is saddening and shocking. It is with deep sorrow that I inform the Senate of her passing.

Mrs. Abel had the distinction of being the only woman ever to be elected to the U.S. Senate from the State of Nebraska. I had the privilege of serving in the Senate during her service there.

Not only did Mrs. Abel serve as a U.S. Senator, but she was one of the few women presidential electors and was a member of the Nebraska delegation to the Republican National Convention that nominated President Eisenhower for reelection in 1956.

Mrs. Abel was one of the most dedicated and willing civic workers in Nebraska. If there was ever a project that required a skilled hand, it was she who lent her services. The selfless spirit of service which she gave to anything that she ever did was one of the hallmarks of this great lady. Mrs. Abel was named American Mother of the Year in 1957, the same year that the Senator from Arkansas [Mr. McCLELLAN] was honored as American Father of the Year.

In her 78 years, Mrs. Abel also served as president of the Nebraska Girl Scout Council and on the boards of trustees at Hastings College, Nebraska Wesleyan University, and Doane College.

Her death leaves a great void in the State of Nebraska, a void not easily filled. To her bereaved family, I offer my sincerest condolences and sympathy. We have all lost a great friend, and Nebraska has lost a great and wonderful woman.

DOROTHY BROWN, 16, OF PORTLAND, MAINE, A PARTICIPANT IN THE WAR ON POVERTY

Mr. MUSKIE. Mr. President, I would like to invite the attention of my colleagues to an article appearing in the July 17, 1966, Portland (Maine) Sunday Telegram. The article concerns 16-year-old Dorothy Brown, of Portland, Maine, and her experiences as a participant in the War on Poverty.

Dottie's first connection with Portland's antipoverty program came through her enrollment in the Neighborhood Youth Corps program for school dropouts. As an NYC enrollee, she became a member of the Operation Headstart recruitment team. She is now enrolled at the Poland Spring Job Corps Center where she will learn skills to enable her to become a productive member of society.

Dottie's experiences as a recruiter for Operation Headstart are eloquently stated in her letter to President Johnson. The conditions in the impoverished homes she visited illustrate the great need for continuing an effective and meaningful antipoverty program.

I believe my colleagues will be impressed with the spirit of this young girl, and I ask unanimous consent that the article be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

[From the Portland Telegram, July 17, 1966]

GIRL CALLED DOTTIE WRITES LETTER TO HER PRESIDENT

(By Marion Roberto, Staff Reporter)

Dorothy Emma Brown paced the floor at the Neighborhool Youth Corps center while anger and frustration welled within her.

Dottie, a 16-year-old NYC enrollee had just spent two days rapping on doors of impoverished families to recruit five-year-olds for Operation Head Start.

And she was heartsick at the poverty and misery she had seen. So she poured out her despair in writing to the most powerful man in the country—President Johnson.

"I don't understand why the President of the United States helps these other Countries when he can't even help his own."

Dottie outlined with graphic clarity home conditions she had seen. Her letter ran almost seven pages.

She made little reference to herself, merely four short sentences: "I'm 16. I live alone. I have been living alone for at least a year now. I had a hard life when I was young."

The letter, it is known, was read by the President, whose response was sympathetic. He said he was grateful to young people like Dottie who try to better the lot of others.

She will frame his answer, she says.

Dottie takes exception, however, to being called young. "I'm not young anymore. I'm not an adult either. I guess I'm just Dottie."

She knows with a fierce certainty that she wants to take care of children, perhaps in an orphanage of her own, or even in Korea.

"I love kids. I know how they feel. I can tell when they hurt just by looking at them," she said.

Dottie's own childhood hurt was so deep she won't talk about it. Oddly, she feels no bitterness.

"I started to but I knew it wouldn't do me any good," she says. "So I bring the hurt out of me by helping other people. And those other memories just go away."

Right now, helping other people means working with little children at the YWCA Day Camp. As an NYC worker she devotes about 32 hours a week with these youngsters.

"I love it. I had a lot of training with a lot of kids. I play games with them and talk to them. This is just my whole life. I'd give my whole life for a kid," she says.

"I feel like I'm wanted by kids and that they need me. I just feel that some of them have the wrong kind of parents. All they need is the right kind of love and the right kind of care, but love is the most important." Dottie wants little for herself; in fact, she asks for nothing. She is financially independent on the $40 a week she earns.

When her day is over she goes to her room and dreams of the future.

"I remember once I wanted to become a nun. Now I couldn't dream of it. A nun has to go to church all the time. How could I take care of kids if I had to be in church?"

Dottie says she's not a Catholic, nor a Protestant. "I'm not anything."

Asked how she feels about God, she answers, "I love Him. I hope He's with me all the way."

The past seven months have meant everything to Dottie. This is the period she's been a member of NYC and she refers to officials there as "my family."

Under the corps' encouragement she attended night school and received her eighth grade equivalency. She may go on to high school "and if I can't get my diploma I'll get all the education I can get."

The corps made arrangements to have Dottie enrolled in the Women's Job Corps Center in Poland Spring. A few strings had to be pulled because trainees homes are supposed to be at least 300 miles away.

Dottie leaves July 26 and will be gone a whole year. "I'm going to miss my family here, the Neighborhood Youth Corps," she says. "Before I came here I didn't know what I was going to do."

She says one of the things the corps taught her was to "start acting more like a lady. And I wear skirts. I don't wear chinos all the time."

She gets annoyed, however, when people tell her she should be a little neater or fix her hair differently.

Somebody tried a while ago. "I'm Dottie," she said with a flash of anger. "And nobody's going to make me into anything but Dottie."

DOROTHY'S LETTER (JUST AS SHE WROTE IT)

"DEAR PRESIDENT JOHNSON: My name is Dorothy Emma Brown. I live at 12 Wescott St. Portland Maint. Im 16. I live alone. I have been living alone for at least a year now. I had a hard life when I was young.

"I'm in the NYC. (Neighborhood Youth Corps). I like my work very much. I do work with children. That's the most important part in my job.

"Yesterday, my councilor Mr. Franciose and Mrs. Kimball put me on a spical mission. The mission was going around to different houses and trying to get the parent's to sign the form for their children ages 5 for the head start program.

"I have to amit it wasn't easy. I just couldn't believe the thing's I saw.

"I went to a lot of poor peoples home's. I felt so bad I had all I could do for not crying.

"I went to one house on salem st. The woman had 5 children, all little one's. Their were feather's all over the place and it looked like they got the furniture out of the dump, the kid's were running and crying, and the mother looked like she had a six pack, what I mean is she looked like she been drinking.

"One of the kid's was sitting on the floor trying to get in a bottle of pill's. their was two of the kid's out sid fighting. I was trying to make the baby laugh, but she just look at me and then turn over in the crib and went to sleep.

"I couldn't stand it and so I went out side while she (the mother) was signing the paper. I told the kid's to stop fighting and then I went in side the house, took the bottle of pills away from the little girl, check her mouth and went out.

"Boy! was that place cold. I felt like taking the kid's and run.

"There was another place on pine street. I felt sorry for those kid's too. their must have been eight, know father, all little one's, rate up to eight year's old.

"They were the cutest kid's I have ever seen. I talk to them and you can tell their hurt. their mother was very mean to them.

"One of the boy's was sick of should I say retarded. He started coming over to me and his mother belted him. I told his mother their wasn't know (reason) for that, and she said he was always in her way. I told her if she didn't want them why that she have them.

"I know that wasn't right for me to say that. I know it was none of my business, but Im interested in kid's so I think it is my business.

"There was another Place on congress street by munjoy hill. She had about 9 kid's, for what I've sen she looked like she was about 60. She had the shakes for maybe it's because of drinking. I wouldn't be surprise at all.

"The funerture look's like it came from the grand central dump. Im not joking either it was torn and had hole's all through it.

"The kid's looked like they came from overseas somewhere. A little girl about two climb on top of a table or what was left of it, and going to jump. I caught her just in time.

"I could go on and on but I think I gave an idea how a lot of people live, in Portland.

"If there is anyway I could help these children I would, and I think the NYC kid's would to.

"I don't understand why the President of the united States help these other countrie's when he can't even help his own.

"Well, I think I made my self clear in a lot of thing's I wanted to say.

"I sure can see that I had a hard life, but their's people that is worse off than I am.

"Sincerely your's

"DOTTIE BROWN."

AND L.B.J.'S REPLY

THE WHITE HOUSE,
Washington, June 29, 1966.

DEAR DOTTIE: I was deeply impressed by your letter about your work with the Neighborhood Youth Corps and your experience in signing up children for the Head Start program in Portland.

It is obvious that you have acquired an important lesson that some people never learn.

The lesson is that regardless of how hard life seems at times—and you have known how hard it can be—conditions can be even worse for others.

I think you would agree with me that our country is the greatest on earth—and that never before have Americans enjoyed such prosperity. That is why I am so grateful to young people like you for giving of your time to help make life a little bit better for your neighbors.

I am glad to hear that you have been going to night school. Keep it up, Dottie, because nothing is more important than adequate education in preparing for the years ahead.

We are depending on citizens of your determination to make this a nation in which some day there will be no such thing as the poverty which caused you to write to me.

Sincerely,

L.B.J.

THE RIGHT MEDICINE FOR NASSER

Mr. HARTKE. Mr. President, President Nasser, of the United Arab Republic, has again spoken out in his customary way, denouncing the United States for its failure to come through with aid for the United Arab Republic in the form of an agreement for $150 million of wheat shipments.

Last Friday's Chicago Tribune commented editorially on this situation, one on which I have previously made my own comments in the Senate and one with which there was some concern expressed during the foreign aid debate so recently.

I ask unanimous consent that the editorial may appear in the CONGRESSIONAL RECORD.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

[From the Chicago Tribune, July 29, 1966]

THE RIGHT MEDICINE FOR NASSER

To President Nasser of the United Arab Republic it is obviously unthinkable to utter a word of thanks to the United States for the one billion dollars or more of food for peace aid he has received since 1954. His tactic is to denounce us whenever we don't come thru with more aid. He has done it once again, this time accusing the United States of delaying a new aid program for the U. A. R. because of policy conflicts over Israel and Red China and because of Egyptian friction with Saudi Arabia, coupling that with a denunciation of "American aggression against North Viet Nam."

"We were told we were not following the right course and that is why we are not receiving aid," he said at a rally in Cairo. "We shall not surrender and we shall not give in, but our views shall always be expressed openly."

Nasser wants Washington to sign a new agreement for 150 million dollars' worth of wheat, corn, and other farm surplus commodities for the current fiscal year, but thus far our government has declined to open negotiations. Perhaps even the state department is fed up with the insults and bullying from this truculent dictator who always has his hand out while his mouth is open inveighing against us, reserving kind words only for the Soviet Union and Red China.

When we ship him food for Egypt's soft currency, which is practically giving it away, he sells Egyptian rice to Red China, sends arms to the Congo rebels, and threatens war against Israel. When we make a show of withholding aid, he tells us to "go drink sea water," the Egyptian equivalent of "go to hell."

Now Nasser says if he can't get American wheat at giveaway prices he will buy it elsewhere for hard currency, presumably British pounds. Our government ought to tell him to go right ahead and do it. Our own dwindling wheat stocks are already committed to the hilt; the Russians are buying 150 million bushels a year for their own use; Canada is literally sold out, and France, Argentina, and Australia have little surpluses left.

Inasmuch as Nasser admires his own independence so much, a dose of it from us should be just the medicine he needs.

SALUTE TO THE COAL INDUSTRY

Mr. BYRD of West Virginia. Mr. President, the Saturday, July 30, edition of the Logan Banner, Logan, W. Va., was dedicated to the coal industry—to reporting the story of coal as seen from Logan County, W. Va., where coal is, in a sense, the bread of the residents there. However, the material in this journalistic salute to the coal industry is not merely of county interest, but of interest to key industries, business men and business centers throughout the United States; and the Logan Banner has appropriately recognized this fact.

In a further effort to inform the American public of the coal industry's many accomplishments, I have selected some of the more cogent newspaper articles from this salute to the coal industry for wider dissemination.

I ask unanimous consent that these articles be printed in the RECORD.

There being no objection, the articles were ordered to be printed in the RECORD, as follows:

[From the Logan (W. Va.) Banner, July 30, 1966]

DECADE OF GROWTH FORESEEN FOR COAL INDUSTRY

While it is now well recognized by security analysts, the general public is less aware that the bituminous coal industry will grow at a rate comparable to the overall economy during the next decade. Equally important, it will be substantially less vulnerable to cyclical influences. The industry should continue to grow on a firm and sound basis as far ahead as we can project.

In 1965, the coal industry shipped 513 million tons to consumers. It is estimated that during 1966, despite work stoppages that occurred during contract negotiations in April, total tonnage produced and shipped will rise to the 526 to 530 million ton level—something short of actual demand. As a result, consumer coal inventories will be reduced appreciably during the year to make up for deficiencies in supply. In the years that follow we expect the tonnage produced and shipped to increase still faster.

The influence bringing both firm growth and much greater stability to bituminous coal is the industry's participation in electric utility expansion. How important this has become is illustrated by the fact that 20 years ago in 1946, the 69 million tons burned by electric utilities represented only 13 per cent of the coal industry's output. This year's 264 million tons, by contrast is 50 per cent of the estimated output.

Not only has electric utility tonnage grown fantastically, but the growth has been steady. Only once in the past 17 years (in 1958) have the electric utilities burned less coal than they did the previous year. Irrevocable commitments already made by the utilities to fossil fuels, plus changing fuel supply relations—coal vs. gas and oil—make it virtually certain that this will not happen again in the foreseeable future.

Market distribution patterns indicates that nearly all growth in coal consumption will result from increased utility demand and continuing strength in export. Estimates of market growth during the next five years are entirely probable.

By 1970, the industry should set a new out-put record of about 638 million tons, up an estimated 125 million tons from the 1965 level. The major portion of this growth—11 million tons—will be in coal for electric power generation. Other contributing factors will include a steadily larger export demand, a strengthening of the steel industry, developments in steel technology favorable to coal, and modest growth in general industry's needs for steam coal.

After 1970, assuming a more modest growth rate of 31 percent, the succeeding five years will witness a rise to a minimum of 741 tons by 1975. It is estimated that 438 million tons or nearly 6 per cent of this will be electric utility coal.

All this is predicted on an economy that will sustain an annual growth of around 4 per cent for the next five years, and near this level through 1975.

Looking more closely at the outlook for coal in the electric utility market, one statistical projection in particular staggers the imagination; the coal to be required by electric utility plants now in operation or under construction for the balance of their useful lives, amounts to an estimated 6½ billion tons. That alone will keep the industry producing electric coal at last year's fast moving pace for the next 27 years.

In its National Power Survey published in 1964, the Federal Power Commission estimated that by 1980 the use of coal under utility boilers would be around 500 million tons, more than twice the tonnage burned in 1965. This will represent a decline in coal's percentage of total fuel consumption for our rapidly growing electric power requirements from 54 per cent of the current total, including water power to 47 per cent in 1980. Nevertheless, the projected growth in demand assures an expanding market for coal for many years.

THE NUCLEAR COMPARISON

Electric utilities not only constitute the largest market for coal, but they rely on coal as the source of energy for 54 per cent of their output. East of the Mississippi River, coal provides 83 per cent of the energy used by the electric utilities.

Despite the glamor of atomic power and the competition of other conventional fuels, the electric utilities' dependence on coal is expected to continue and to increase.

Every announcement of a decision to build a nuclear power plant is headline copy, while great and continuing expansion of electric utility generation, based on coal, is only of local import. Thus it may be news to many people that nuclear power last year provided electricity equal to about 1½ million tons equivalent. This amounted to one-third of 1 per cent of all electricity generated in the United States last year.

This is not to deny that nuclear power is destined to grow, and grow rapidly. Referring again to the Federal Power Commission study of 1964, by 1980 nuclear sources are expected to provide 19 per cent of total electric generation. But even then this will be equal to only 40 per cent of coal's projected contribution in that year.

During the past 15 months, commercial nuclear power plants sales have been announced totaling 12,000 megawatts (30,000,000-ton annual coal equivalent) for installation by 1971. At the same time, however, there are under construction, in process, or planned, some 100 coal fired plants with a capacity of 49,252 megawatts. These units alone will require 123 million tons of coal annually by 1971.

In concept, principle and practice, the nuclear reactor is a perfectly feasible, proven source of energy for the generation of electricity. Actual experience with nuclear generation of electricity has been confined to generating units of less than 400 megawatts. Manufacturers' estimates of cost and performance characteristics of large plants generally are derived from extrapolation of experience data on these smaller units.

In actual practice, the latest of these smaller units to be installed in high-fuel cost areas are apparently proving competitive with coal. While it is not unreasonable to expect that in the large plants economy of scale will result in lower cost, the extent of such potential cost savings is as yet to take into account the fact that the development of nuclear power generation to this economic capability has been made possible largely through heavy government subsidy, which may not continue.

NATURAL GAS COMPETITION

In 1963, marketing of natural gas to U.S. markets (after excluding field use and carbon black manufacture) increased 7.7 per cent to 510 million tons of coal-equivalent.

The greatest portion of this increase by far, however, is accounted for by market growth, in the small commercial and industrial installations and more, especially, in residential uses. Fewer and fewer conversions from coal to gas are taking place, partly because the coal-fired units most vulnerable to gas competition have already been converted.

In the larger installations where the economy and reliability of coal off-sets the convenience of other fuels, natural gas is no longer providing the fierce competition it did during the great Eastern expansion of the fifties. This is especially true for electric power generation. Last year the electric utilities used slightly less gas under boilers than in 1964, despite a 7.2 per cent rise in demand of electric power. In coal's territory, gas used for such purposes actually declined 3 per cent from 1964 to 1965.

More and more, as new gas discoveries come harder, the product will be marketed as retail where the return can compensate for rising production costs. Moreover, this limitation on known natural gas reserves open up new opportunities for coal as we indicate in a later section of this report.

RESIDUAL OIL COMPETITION

In recent years, imported residual oil has become a significant competitive factor in certain markets for coal. Although not a direct competitor to Island Creek, we do feel its impact indirectly to some extent as coal replaced by residual oil in eastern markets seeks new outlets in our marketing areas.

The new import quota plan recently promulgated by the U.S. Department of Interior has as its goal the providing of adequate residual oil imports to all users, while at the same time preventing dumping and market flooding.

Oil used by U.S. utilities (virtually all of its Bunker "C," the type that is imported presents about 7 per cent of their total mineral fuel consumption. It is concentrated in four regions, New England, Middle Atlantic, South Atlantic, and Pacific. But even in these four areas, residual oil is only 15 per cent of all fuels used under utility boilers.

HOW COAL COMPETES

Coal's answer to competition rests on the following:

1. Large available reserves, well situated and readily mineable at competitive costs.

2. Enormous investments to improve mining efficiency, which have raised mine productivity to a record high. Cost of coal at the mine are down, notwithstanding steady increases in materials and labor costs and the heavy investments requires to maintain the industry's competitive position.

3. The development of extra-high voltage mine-site generating units, which are capable of utilizing on the order of ten million tons of coal per year. The practicability of long-distance power transmission by wire is a proven fact. This was recently attested to in the plan announced by the American Electric Power System to tie together power plants, in five of seven states in which the company operates, by a 765,000 volt network, at a cost of about $200,000,000.

4. The unit train concept, which includes rapid loading of a 10,000 train in 4 hours, loading in motion, billing and handling trainloads as one unit, elimination of weighing by railroads, elimination of classification yards and layover points, better utilization of equipment, unloading in motion, larger cars and automated locomotives. Most new generating plants to be served by unit trains will require the development of new mines within a radius of more than 100 miles. Ton-mile rates change from 4 to 8 mills and savings against single car rates average 30 per cent or more.

5. Exploitation of water transportation, within extension of barge line operations from inland waterways to the Gulf of Mexico and to Tidewater. Utilized barge movements are a reality, and it's possible to achieve the same rate of loading efficiency with barges as with rail transport.

6. The coal pipeline is still a possibility in areas such as the West, where power plants are to be located midway between the mines and the load center or power consuming area.

These factors give promise of significant reduction in fuel costs as mines, transportation companies and utilities cooperate to lower the cost per million BTU. Savings could range from 15–25 per cent in fuel costs at the generating plant.

Since 1962, on a national average, coal has been the lowest-cost fuel consumed by the utilities. In 1964 the utilities paid an average of 24.6 cents per million BTU of heat produced from coal; 25.3 cents for equivalent heat from natural gas; and 32.6 cents from oil.

EXPORT MARKETS

Opportunities for expansion in the export market are substantial. The important point about export markets today is that they are growing convincingly on a sound and non-emergency basis. In past years, the overseas portion of the coal export business rose and faded with wars or other emergencies such as the Suez crisis. For several years after World War II, a very large part of our business with Canada, our largest export customer, was based on railroad fuel which disappeared with dieselization.

Today we can be optimistic about the outlook for American coal exports both to Canada and to other parts of the world. Canada's growing economy requires more steel, and the six million tons of coking coal now being shipped north of the border is destined to increase. But the fastest growing segment of this market is also the electric utilities. Canada's need for electricity is rapidly outstripping her ability to generate it in Hydro plants and transport it economically to the big load centers.

Overseas, the demand base for American coal rests on what a steel executive customer of ours describes as a "World-Wide shortage of carbon." Increased quantities of good coking coal to supply industry at the most economical prices are mainly available only from the United States. About 60 percent of U.S. bituminous coal exports are high-quality metallurgical grades. This metallurgical coal segment of overseas demand is growing rapidly enough to more than offset losses in steam coal tonnage. But even this latter market loss may be reversed in the next three to four years. American coal will likely fuel some of the big steam plants being built on Europe's west coast. It wil be moved there in colliers now under construction exceeding 70,000 tons capacity. France is building one of 84,000 gross tons capacity which is expected to provide the lowest per-ton-mile transport cost in the world.

AIR POLLUTION

The coal industry, for both humanitarian and financial reasons, is helping in the fight against air pollution. There can be no question that the air around us must be treated as an indispensable natural resource. As such, its use must be properly managed in accordance with the principles of conservation generally applicable to other natural resources.

Air from time immemorial has served as convenient, low-cost means of disposing of

impurities and wastes. It is only when its capacity to handle waste products is exceeded that problems occur.

Reasonable standards for air quality are vital if effective results are to be achieved at reasonable costs. There is general agreement that complete information on which to base such standards still is not available. It is essential that the problem be approached from the standpoint of improving our ability to control air pollution without handicapping our industrial standards of living; any other path will cost the community more than it can afford. We are confident that a workable solution can and will be found.

STREAM POLLUTION

Mine drainage which pollutes streams and rivers has been a problem in the extrative industries from the beginning. Much energy, time and money have been expended in seeking economical methods of its reduction and control, and much progress has been made. However, the complexity of the problem of stream pollution (which is caused by many factors in addition to mine drainage) has limited the success of all efforts by business and government to date.

The problem of stream pollution, too, can and will be solved, but a better public understanding will avoid passage of laws which can result only in economic privation to sizable segments of the people in mining areas.

STRIP MINE LEGISLATION

The trend is toward tighter regulations of the strip mine operator in all extractive industries. Kentucky is the most recent example. This law requires the usual type of permit applications bonding, and advance planning and mapping of strip mine operations. It requires permits for coal facing explorations, and haulage and access roads in deep as well as strip operations.

But it also provides that in areas of continuous stripping, mined land shall be returned to its original contour, with the last cut filled, which is extremely expensive.

This legislation does not affect Island Creek appreciably, since we do very little strip mining. And although strip mining is expected to account for a diminishing proportion of total production in the future, it currently provides almost a third of total bituminous output. Last year it produced about 160 million tons, over 31 per cent of the total. But the industry is aware that the time has passed when surface land can be stripped and abandoned. Increasing progress in reclamation is being made.

THE LONG-RANGE VIEW

Coal assures the nation and the world of a long-term supply of dependable and economical energy. We have barely tapped the vast storehouse of energy in U.S. coal deposits during the two centuries since coal was first mined near Richmond, Virginia.

In 1960, the U.S. Geological Survey reported an estimated 1,660 billion tons, or about 30 per cent of the World's known coal reserves, still underground in 34 of our 50 states. This means (using a 50 per cent recovery factor) that the nation has about 830 billion tons of recoverable coal or enough to last more than 1,500 years at present rates of production. And the Department of the Interior thinks the U.S. has much more than that.

All conventional forms of energy we know and use today, electricity, gas, oil, gasoline, residual oil, and diesel fuel, can be produced from coal.

This, plus the limited availability of mineral fuels other than coal, has spurred research and development programs by Island Creek as well as other leaders in the industry for new applications and uses of coal.

Much additional research for the coal industry is centered in the laboratories of its Bituminous Coal Research, Inc., an affiliate of the Nation Coal Association. Finally, the Office of Coal Research, under the U.S. Department of Interior, sponsors many research projects.

Both the coal and petroleum industries are working with and without government sponsorship on a variety of approaches to producing pipe-line quality gas, gasoline and other liquid hydrocarbons from coal. The cost of producing gasoline from coal experimentally has been pushed down by project advances to a 13 cents per gallon range—competitive with gasoline from petroleum in most coal-producing areas of the country.

Other projects that hold forth interesting possibilities include coal beds for sewage treatment and water purification; the production from coal of carbon black for strengthening industrial rubber; and the use of coal by-product, fly-ash, in manufacturing brick and cinder block for the walls of your home.

We take coal for granted when we flip an electric light switch. Probably we will be the same casual coal consumer in the future when we heat and cook with gas produced from coal. . . and when we operate our automobiles on coal based high octane gasoline.

But as coal men and investors in the coal industry we can be eternally grateful that coal is a source of energy.

THE ROLE OF ISLAND CREEK

Island Creek, currently the third largest producer in the industry now has in excess of three billion tons of coal under fee ownership, lease, option, or control by virtue of envelopment.

Metallurgical coal reserves are in excess of one billion tons. The remaining two billion tons are classified as steams coals for industrial and electric utility use.

Total sales, including production from current operations and supervised mine, reached 21 million tons in 1965 and should amount to 25 million tons in 1966, despite the work stoppage during April.

Capital expenditures during the past ten years have amounted to $72 million, and we anticipate that expenditures through 1966–1970 period for expansion, replacement and improvements will range from $75 million to $100 million.

Island Creek is one of only a few companies in the industry—perhaps not more than six or eight that are large enough, have sufficient reserves, and are so organized that they can compete fully under today's marketing conditions.

Island Creek coals are marketed throughout the United States, in Canada, and overseas to Europe, South America and Japan. We have so diversified that we are now able to serve all coal consuming markets in these areas—metallurgical, retail, industrial and utility.

The 21 million tons of coal we marketed during 1965 was nine million more than we sold in 1961. It was divided 15 per cent metallurgical, 7 per cent industrial and other general market applications.

As we look down the road toward 1970–71 current projections indicate that sales could reach 37 million tons as mines now planned engineered or under construction are brought on steam. This represents nearly a 50 per cent increase over the current year's rate of sales. We have the reserves, the potential, the markets, the master plan, and we are convinced, the knowhow to accomplish this.

It looks like an interesting future, both for coal and for Island Creek.

[From the Logan (W. Va.) Banner, July 30, 1966]

MOVING COAL FROM MINE TO MARKET BIGGEST TRANSPORT JOB IN WORLD

Coal and railroads have been keeping company since the early days of the old steam locomotive. And even though the once familiar steam locomotive has been retired in favor of the diesel, the railroads still enjoy more revenue from hauling coal—about $1 billion a year—than from any three other commodities combined.

In fact, moving bituminous coal from mine to market is the biggest transportation job in the world. The railroads have had the bulk of this business for many years: in 1964 almost 72 per cent of all the bituminous coal going to market left the mine by rail. Most of the remainder was about evenly divided between truck and water transportations. However, coal may use several means of transport en route to market. For example, an estimated 200 million tons moves at least part way by water, including 90 million on inland waterways.

The recent technological improvements in coal production, steadily reducing the average price of coal at the mine, are being matched by improved means of getting the fuel to the customer. The benefits of cost reductions go to everyone who uses coal energy in any form—as most of us do in electricity, steel or some other way.

The earnest desire of the railroads to hold and expand coal traffic is shown in the development of the unit train, a perhaps 10,000 tons or more directly and at high speed toward a utility generating station or other large consumer. After discharging its load the empty train speeds back to be refilled, often passing another fully-loaded unit train outbound for the same destination.

These unit trains mark only the beginning of a modern transportation of coke to market. In time—perhaps a short time—single haul capacities will increase to 15,000 tons and beyond.

When hopper cars of the 1940's carried 50 tons, new coal cars now handle 70 to 100 tons with ease. Larger cars, capable of carrying as much as 145 tons, are in the development and testing stage. Even larger are being developed to carry 200 tons or more. As of April 1, 1966, railroads reported 12,066 new coal hopper cars on order for delivery before the end of the year.

Even so, the railroads do not regard the unit train as the ultimate answer to maximum economy in moving coal to market. The so-called integral train, a step beyond the unit train, will feature semi-permanently coupled cars with motive power units spotted throughout its length. The integral train's coal carriers can be overturned and dumped without being uncoupled. Time-consuming turn-around problems will not plague it.

For the present, though, the unit train is helping coal to keep the price down in the highly competitive fuels market. Major coal-carrying railroads—the Baltimore and Ohio, Chesapeake and Ohio, Norfolk and Western, Pennsylvania, New York Central, Louisville and Nashville, for example operate unit train in increasing numbers. Many are easily identifiable, bearing distinctive markings on each car, such as B and O's gold stripe and C and O's gold disk.

One major coal company reports that 80 per cent of the coal shipped to electric utilities in 1965 moved by unit train. Some utilities, such as Pennsylvania Power and Light Co. and have invested heavily in coal cars of their own. PP and L now has 210 cars of 100-ton capacity, with more on order, and Commonwealth Edison had 153 of the same capacity. These are turned over to railroads to operate between the mines and major generating plants. Coal companies likewise are buying their own 100-ton cars for unit train use.

Water carriers too are carrying more coal than ever. Basic tows of up to 20 barges carry 20,000 to 30,000 tons of coal at a clip. Improvements in motive power and in the design of equipment are increasing the efficiency of waterborne coal movement much as the unit trains have increased railroad efficiency.

Coal producers on or near inland waterways have the option of shipping by water or by rail, depending on the most advantageous route and rate. In 1964, some 12.2 per cent of the coal produced was shipped from the mine by water, compared with 11.4 per cent in 1963.

Along the eastern seaboard coal is shipped northward by water from the port of Hampton Roads, Va. One company has converted 11,000-ton Liberty ships into unmanned barges for towing to northern ports by some of the nation's largest ocean-going tugs. Another company ships coal down the Mississippi and across the Gulf of Mexico to customers in Florida.

Great Lakes colliers in 1964 carried 51.4 million tons of coal, an increase of about 13 per cent over 1962. Deliveries to Great Lakes loading ports, often in unit trains, have been accelerated by more efficient equipment. Conveyor belts from storage piles to ships carry coal at a rate of 6,000 tons an hour.

At tidewater ports, where U.S. bituminous coal is loaded principally for overseas destinations, the loading rate is substantially greater—as much as 16,000 tons hourly. At some piers in the Hampton Roads area two ships can be loaded at one time, including supercolliers capable of taking on 60,000 tons or more in a matter of hours. Reduced turnaround time in U.S. ports enhances the economic attractiveness of the nation's coal. Overseas bituminous coal shipments in 1965 amounted to 34.5 million tons, nearly 4 percent more than in 1964.

Hampton Road Channels are being dredged to a depth of 45 feet, enabling the port to handle even large supercolliers. These include Japanese ships capable of carrying 70,000 to 75,000 tons, and the two mammoth French colliers now under construction which will each carry more than 80,000 tons of coal. Coal-handling facilities at other eastern ports are being modernized to accommodate larger ships and increasing tonnage. These include Curtis Bay in Baltimore and coal piers in Philadelphia and South Amboy, N.J.

While the improvements in truck movement of coal have been less spectacular, they have been significant, particularly in the transportation of coal from surface mines to nearby preparation plants. Mobile off-highway monsters now haul as much as 240 tons in a single load. Short-haul trucks carry about as much coal as moves by water—13.5 per cent in 1964, up from 13 per cent in 1963.

The transportation revolution is not limited to the carriers of bulk coal. Another comparatively new development is the nine-mouth generating station that uses a coal-by-wire technique. A single huge generating station, built almost atop a coal mine, can serve several utility systems through extra-high-voltage transmission line interconnections.

Mine-mouth generation stations are becoming more numerous in such states as Pennsylvania, West Virginia and Illinois where the reserves of coal are available and consumer demands are rapidly increasing. The coal-by-wire technique also is opening new vistas for coal in the West where mine-mouth plants in Arizona, New Mexico and Utah are now or soon will be generating electricity for consumption as far west as California.

American Electric Power Co. announced plans early in 1966 to build a transmission circuit of 765,000 volts, a $208 million project that was described by the company as the highest voltage system in the world. Lines of 500,000 volt capacity are the largest in this country to date. When completed in 1972, the new 1,050 mile system will link power plants in five of the seven states.

Another proven method of transporting coal is by pipeline. A few years ago coal slurry, a mixture of water and finely ground coal, moved by pipeline from a Consolidation Coal Co. mine in southeastern Ohio to a power plant near Cleveland 108 miles away. The pipeline operated successfully for five years but was closed when the railroads offered more favorable rates. The coal pipeline technique is being considered for possible use in other areas.

Thus, by a variety of methods—by rail, water, truck and by wire—coal is shipped from the nation's mines to a wide range of consumers, large and small, at home and abroad. Improvements and innovations in various transportation forms in recent years have enabled coal to remain the lowest-cost fuel available, on a national average, to the electric utilities, the coal industry's No. 1 customer.

Spurred on by competition, both the mining of coal and its delivery to market are expected to undergo further dramatic changes in the next few years. All indications are that, for the foreseeable future, the movement of coal will remain the biggest transportation job there is.

BITUMINOUS COAL INDUSTRY ENJOYS BEST PRODUCTION, CONSUMPTION YEAR IN 1965

In 1965 the bituminous coal industry had its best production and consumption year since 1951, strengthening its position as a modern growth industry with bright prospects for the future.

Bituminous coal production (production and consumption are used interchangeably) was 510 million tons in 1965, an increase of 23 million tons, or 4.7 per cent, over 1964. The 1951 output was 533 million tons.

In the early months of 1966 many industry economists believed that 1966 would be a substantially better year than 1965 and that the 533-million ton figure of 1951 would be exceeded. In the first quarter of 1966 production ran about 4 per cent ahead of the corresponding 1965 level.

The nation's electric utilities consumed 243 million tons of bituminous coal in 1965, 29 million more than in 1964. Almost half of the coal mined in 1965—47.6 per cent to be precise—went into the production of electricity.

The electric utility is not only coal's best customer, but also its fastest-growing market in recent years. The demand for electricity doubles about every decade, and so increases the need for coal to generate the additional power. Electric utility plants burned 59.9 million tons in 1941, slightly more than 12 per cent of the total domestic consumption. In 1967 the utilities are expected to burn more than four times as much—better than 260 million tons. This would amount to approximately 50 per cent of the estimated 1966 production.

Meanwhile, the utilities are using coal far more efficiently. It took about 1.3 pounds of coal to generate a single kilowatt-hour of electricity in 1941. The current rate is 0.86 pounds per kilowatt-hour, the level first reached in 1961, some 34 per cent below the 1941 rate. Coal costs have been dropping, too, from an average value of $5.08 per ton, f.o.b. mines, in 1957 to $4.45 in 1965. Increased efficiency in mines, plus cost-cutting innovations in transportation, have made coal a better bargain in the utility fuel market.

Unit trains—special designated trains that shuttle between mines and consumers—have been a decisive factor in holding down the cost of transporting coal from the point of production to the point of consumption. The railroads developed the unit train as a more efficient means of moving the vast quantities of coal which go by rail to electric generating stations.

In addition to unit trains, other relatively new means of transporting coal's energy have been devised. Extra high voltage power lines now make it possible for the consumer to go directly to the mine to build a generating facility. Under this coal-by-wire concept, the power is produced at a generating station located near the coal production point and distributed by high voltage lines to utilities serving millions of customers many miles away.

Several huge mine-mouth plants are located in the Appalachian coal fields to service the heavily populated areas of the East. Similar plants are being developed to provide additional power for the expanding population of the West, particularly Southern California.

Coal's second-ranking customer is the steel industry, which in 1965 used 94.6 million tons to make coke for its blast furnaces. Steel mills also burned about 5.4 million tons to generate steam and electric power for plant use and for space heating.

The cement industry, another of coal's major customers, consumed nearly 9 million tons in 1965. Other major industries—chemical, food, paper, automobile, textile, plastics, ceramics and rubber—also use large quantities of coal for space heating and for process heat and steam. The industrial market for bituminous coal, exclusive of steel, amounted to 103 million tons in 1965, an increase of 2 million from the previous year.

Coal's retail markets have been declining, even though substantial tonnages are still being used to heat homes, public buildings and commercial and industrial facilities. Retail consumers of bituminous coal burned 122 million tons in 1944; the market in 1965 was about 15 per cent of this peak. The railroad industry once ranked as coal's largest single customer, burning 132 million tons in 1944 in steam locomotives. When the diesel locomotive took over, this market vanished.

The coal industry went through some lean years while its markets shifted, but the growing demands of electric utilities led a strong comeback. Now steel, general industry and export markets show new vigor.

The United States is the world's largest exporter of bituminous coal. Shipments to Canada reached 15.7 million tons in 1965, up 1.7 million from 1964, while oversea buyers took 34.5 million tons, about one million more than in the previous year.

Coal shipments abroad are now valued at nearly $500 million per year. Most of this is net gain for the U.S. balance of payments, since only a negligible amount of coal is imported into this country. About 60 per cent of U.S. bituminous coal exports are high-quality metallurgical grades.

Approximately 24 million tons of the coal shipped overseas in 1965 went to Western Europe, about 21 million tons of it to members of the European Coal and Steel Community. The largest single European importer of U.S. coal in 1965 was Italy, which took 8.9 million tons, Japan purchased 7.5 million.

The recent gains in coal markets were achieved despite determined competition from other fuels, often reinforced by government subsidies of policies detrimental to coal.

Along the Atlantic Coast, for example, coal has lost many industrial customers to cut-price imported residual fuel oil, the heavy black dregs of the oil refining process. In the interest of national security, the government in 1959 imposed import quotas on residual oil to minimize reliance on foreign supplies. However, quotas were progressively increased until in 1966 they existed in name only, and importers were allowed to bring in all the residual oil they could sell.

Coal also bucks strong competition from natural gas in the industrial and utility markets. Like residual oil, gas is sometimes dumped into these markets at prices designed to undersell coal regardless of the price at which coal is offered.

Many commercial and industrial installations are lost to natural gas as a result of the pricing policies. Gas pipeline and distribution companies offset the "dump" prices by higher prices charged to other consumers.

The atom, too, is a competitor in the utility fuel market—a new and growing one. With increasing frequency, utilities have announced plans to build large atomic power plants which their manufacturers claim will generate electricity at cost lower than those of coal-fired plants of the same size. None of these economically competitive plants has yet gone into full-scale operation, however, and it will be several years before experience demonstrates the claims concerning atomic power costs.

The atomic power industry has been ushered to—and perhaps through—the door of competition with coal by hundreds of millions of dollars spent on government-financed research and development. Large plants now being built still enjoy the benefits of subsidies in the form of earlier government research, government leasing of uranium fuel enriched in government facilities, and government protection against any of the financial consequences of any major incident at an atomic plant.

Direct government financial assistance is not involved in the atomic power stations now under construction, and utilities in time—by 1971 at least—will have to buy rather than lease uranium fuel. Later they will be required to pay full commercial rates for enrichment and recovery of unspent fuel. But for another decade at least, the utilities will enjoy complete freedom from financial responsibility for the consequences of any atomic plant incident, even though the Atomic Energy Commission itself has said total public liability damages in a major accident could run into billions of dollars.

While opposed to subsidies which favor the atom over coal, the coal industry has not opposed development of the so-called fast breeder reactor. This type of reactor, in contrast to the light-water type reactors already developed, would make more efficient use of uranium.

Uranium contains large amounts of potential energy, but only about 2 per cent of this energy is used in light-water reactors. A breeder reactor, through use and re-use of the fuel, would use about 80 per cent of the energy in uranium. Since the known supplies of low-cost uranium are limited, development of the breeder reactor has taken on more urgency.

The marvels of mechanization which have made the mining and transportation of coal more efficient have been matched by advances in the technology of handling and burning coal, which is now as automated as any other industrial process.

Pushbuttons, machines and automatic controls have taken the muscle—and the dust and ashes—out of coal-fired boiler rooms. Modern electric utilities burn coal in clean, modern equipment—and so do schools, hospitals, apartment buildings, factories and office buildings.

Bituminous Coal Research, Inc., NCA's research affiliate, pioneered the development of a completely automatic coal-fired steam or hot water generator. It is available now in two versions manufactured by The International Boiler Works Co., and the Power-Matic made by the Canton Stoker Corp. These are factory-assembled and ready for use after service connections.

U. S. Office of Coal Research contractors have developed plans and specifications for coal-fired boiler plants for factories, hospitals and institutional buildings. Thus, from the complex generating stations of electric utilities to the compact heating of small plants, modern coal-fired boiler units are available for economic and dependable use.

Many large industrial plants, as well as electric utilities, take advantage of the high combustion efficiency of pulverized coal firing. In this method, coal is ground to the fineness of powder and blown into the furnace where it burns while in suspension.

The coal industry shares with its customers a deep concern over air pollution. It recognizes its responsibility to help clear the air from contaminants, and it is making a concerted effort to overcome the problem.

Solid pollutants from coal burning principally smoke and fly ash—are becoming a minor part of total air pollution. Coal producers, consumers and combustion equipment manufacturers have made it possible for modern coal-burning plants to hold their emission of solid wastes well within the scope of reasonable regulations.

The coal industry first attacked the problem at the mine itself. It revolutionized the old mine tipple into the modern preparation plant where coal is washed and cleaned of its removable impurities, graded and sized to customer specification and even dust-proofed for shipment. Such plants remove as much ash, sulfur and other mineral matter from coal as is physically possible before shipment.

Strip Mining Accounts for One-Third of Output

Two major problems in underground coal mining are to hold up the roof and ventilate the mine adequately. But where coal lies near the surface—and "near" is a relative term which might mean 140 feet or more—there is a simple solution: Take off the roof, set it aside, and pick up the coal.

This is surface, or strip mining, a technique developed a century ago, in 1866, and which now accounts for about one-third of the nation's total coal output.

Cost is one big consideration in the expansion of strip-mined tonnage since World War II. One estimate is that if all 1965 coal tonnage had come from underground mines—that is, if there had been no strip mining—the U. S. consumer would have paid over $233 million in extra costs for the year. For the previous year, 1964, the U. S. Bureau of Mines says that the average value of strip mined coal was $1.37 per ton cheaper than underground coal.

Economy is one factor encouraging the development of strip mining. Efficiency—and in many cases, necessity—are others. When special geological and topographical conditions in an area made underground mining impracticable, surface digging becomes the only feasible way to get at a coal seam.

But like other earth-moving processes, the immediated effect of strip mining often is to leave the land in barren condition, with piles of earth and rock marring the landscape. Responsible coal operators, however, reclaim the land after mining and restore it to beneficial surface use through carefully planned voluntary program.

Four decades of mined and conservation programming have taught the lesson that what is good reclamation practice for one area is not necessarily the answer to reclamation problems elsewhere. Thus, depending on the topography and nature of the soil, mined land may be reclaimed for agricultural or grazing use, or reforested, or transformed into land and water recreation areas.

The first planned reclamation of strip-mined coal land began in 1918, when Indiana operators planted peach, apple and pear trees on a mined area in Clay County. Those trees, some of which still bear fruit, were the first of 46 million planted in Indiana alone in a comprehensive reclamation program.

Similar voluntary industry programs in other surface mining areas revegetate the hills and dot the hollows with lakes. The coal industry cooperates with government and private conservation services to create new land uses.

Coal companies and their associations have also invested in soil conservation, and they use research programs conducted by universities and agricultural services.

Perhaps the best-known results of the programs are the lakes, parks and playgrounds where land which has yielded its coal now provides picnic areas, camping grounds and a habitat for fish and wildlife. Striking examples of the recreational use of mined land exist in almost every strip-mining state. To list only a few:

Fairground Park, near Duquoin, Ill., once mined by the United Electric Coal Companies, and now the site of the Hambletonian, the Kentucky Derby of harness racing.

The Linnville, Ind., community reservoir, once land mined by Peabody Coal Co. Lynnville had a chronic water shortage, and hauled in much of its supply by truck, until the coal company's community minded planning created a lake four miles long and 50 feet deep. Holding more than 400 million gallons of potable water for Lynnville.

The Pittsburg & Midway Coal Mining Co.'s awarded-winning Kansas conservation program, representing a 30-year company investment in reclamation planning and experimentation. P & M has developed not only recreation facilities—its lakes provide some of the finest fishing in Kansas—but fruit and walnut orchards, vineyards and pasture areas. The Kansas Wildlife Federation presented the company its "Soil Conservationist for 1965" award. (And in western Kentucky, Scotch pine trees grown on P & M reclaimed mined land were cut and shipped to Washington to be featured in the 1965 White House Christmas Pageant of Peace.)

The Wee-Ma-Tuck Hills Club in Fulton County, Ill., where 75 year-round homes are being built on 3,000 lake-dotted acres of mined land which has been converted to an upper-priced housing development.

The three-county, 100,000 acre, "outdoorsman's paradise" created by Ohio Power Co. on its strip-mined lands, in cooperation with the State Division of Wildlife. More than 350 lakes and ponds, loaded with bass, bluegill and channel catfish, dot a wilderness that shelters deer, beaver, waterfowl and other wildlife.

But not all reclaimed land is turned into playgrounds. Where soil conditions permit, the land may be leveled and planted to crops—and may be more productive than it was before mining. Ayrshire Collieries Corp., for example, has an agricultural subsidiary, Meadowlark Farms, which profitably grows grain and livestock on coal lands in Indiana, Kentucky and Illinois both before and after mining. Several other companies raise cattle where they once mined coal. Other coal companies have commercial orchards and forest on mined land—one firm is even experimenting with elderberry bushes, under a contract with a big jam-making company.

Agricultural use of reclaimed mined land has grown more varied with time and successful experimentation. In addition to pasture lands for cattle, sheep and hog-raising, reclaimed land and lake areas are being used for raising such off-beat commercial livestock as buffaloes and bullfrogs.

Still other reclaimed areas are providing attractive sites for private homes, churches, theaters, schools, shopping centers and industrial parks.

Coal for Power Will Double by 1980

America is in the early stages of an energy explosion. The pictures and facts amply demonstrate that coal as a fuel for electric power is fully participating.

Science and industry daily produce new ways to improve our standards of living, production of goods, communications and transportation—all consuming energy. At the

same time, our national level of disposable personal income—which dictates our ability to profit by these accomplishments—grows steadily higher each year: and, finally, America's 196 million population is expected to grow to 300 million or more by the turn of the century.

Considering all these factors, looked at the foreseeable future in terms of energy necessary to meet our demands. Their findings are both exhilarating and challenging.

The Federal Power Commission's widely quoted National Power Survey predicted that total demand for electric power would more than triple in the two decades, 1960–1980. It also forecast that by that date 87 per cent of all electricity would be produced in steam generating plants, of which 68 per cent will burn conventional fuels—principally coal; 19 per cent would be nuclear, with the rest hydro or imported from Canada. If the demands forecast in the survey are realized, coal's share will require some 500 million tons annually for electric power generation alone, and the FPC projects a total demand for coal of about 800 million tons per year.

Already, coal's total utility use is moving firmly toward that goal. Presented in reports on more than 75 new coal plants with 42 million kilowatts of capacity being built between 1965 and 1971. The plants will consume more than 100 million tons of coal a year, and increase by more than 40 per cent present utility coal consumption. They will produce 290 billion kilowatt hours of electricity each year, enough to supply the needs of four cities the size of New York, or six equal to the metropolitan area of Chicago. The coal consumed each year will provide employment for 45,000 miners, railroad workers and others needed to produce and deliver it, and it will add $270 million each year to the economy of the states where it is mined and through which it is transported.

Even when the anticipated annual consumption rate of coal reaches 500 million tons for utility use and 800 million tons for all demands, the nation will still have sufficient reserves to supply coal for hundreds of years. The nation's insatiable demand for electricity will require the wisest utilization of all our energy resources in the years ahead, and it will make mandatory that our ingenuity is equal to producing, delivering and consuming the phenomenal reserves of coal in the national interest, and in competition with nuclear as well as any other source of power.

Coal today presents a moving competitive target for nuclear and other fuels. The industry-wide campaign to achieve increased efficiency in the mining and transportation of coal is continuing unabated. This means that the benefits of improved coal technology which have accrued to the consumers of electric power will be extended and expanded in the years ahead.

These goals will be reached in a climate of sharp competition, particularly between coal and nuclear power. Although no large nuclear plants have yet been completed and operated, and the Atomic Energy Commission has refused to certify that nuclear plants are yet proven to the point of being determined to have "practical value," under the law, a number of utilities are building or planning to build them. Already under construction are six large nuclear plants with combined capacity of 2.6 million kilowatts, and several others are in the planning stage.

COAL PRODUCTION IN 1965 HITS PEAK OF 510 MILLION TONS

The bituminous coal industry in 1965 produced 510 million tons. This was 23 million tons more than in 1964, and the biggest year since 1951. Production early in 1966 pointed to another increase, perhaps topping the 1951 output of 534 million tons.

All signs indicated coal production will increase in the years ahead. Electric utilities are burning more and more coal each year, and coal's other major markets are soaring with the population and its standard of living.

Coal bucks strong competition in the energy market, but enormous investments to improve mining efficiency are paying off.

Mine productivity is now at a record high. The average American bituminous coal miner turned out 16.84 tons per work-day in 1964, over a ton more per day than in 1963. This is about three times the miner's 1944 output, and about twice that of 1953

Costs of coal at the mines are down, despite increases in costs of materials and wages, and the heavy investments required to maintain the industry's competitive position. In 1964, the average value per ton of coal at the mine was $4.45, a drop of 12.4 percent since 1957.

More than two-thirds of America's coal is mined underground, where once the pick-and-shovel worker tunneled his way. These tools have been replaced by complex and costly machines.

This was demonstrated during the filming of the industry's award winning motion picture, "The Invisible Power of Coal." For a better camera angle, the director wanted to move a pile of coal near the working face of a mine. Filming came to a halt for nearly an hour. It took that long to find a shovel the nearest one was above ground.

About 60 per cent of coal mined underground is produced by what miners call the conventional method—a smooth-working five-step procedure. Mobile cutters, built like giant chain saws, carve a slot under the working face. Boring machines drill deep holes into the face for chemical blasting agents or cylinders of compressed air which blast the coal loose. The loading machines then move up, voraciously gathering coal with crab-like arms, sweeping it into conveyor belts which carry it back to waiting shuttle cars to start its trip out of the mine. The coal moves out of the mine by conveyor belt or by rail.

In other mines, huge continuous mining machines, controlled by one man, tear the coal from the seam with spinning steel teeth. At rates as high as 12 tons per minute, these machines rip out the coal, scoop it onto their own conveyors, and drop it into shuttle cars, mobile conveyors, or on the floor for subsequent handling.

Whatever method is used, the machines move ahead with precision, carving out tunnels carefully planned by mine superintendents and engineers. A mine map looks much like a city map, with tunnels and roof-supporting pillars of coal resembling streets and blocks.

The pillars help support the mine roof until they are no longer needed and the coal in them can be removed. For further roof support, roof belts have largely replaced traditional wooden props. As the mining machines move forward through the seam, holes are drilled into the roof. Long expansion bolts are inserted and tightened in the holes to bind the overlying strata and secure the roof. Science is also developing electronic gear for locating hidden rock faults.

Another mining technique, imported from Europe, provides its own protection from roof fall. The long-wall mining machine employs a plow or whirling planer which is pulled back and forth across a working face several hundred feet long. The loosened coal is dropped onto a conveyor. Self-advancing hydraulic jacks support the roof and follow the machine as it slices into the coal on a wide front.

At surface mines, the coal industry's newest tools have become truly gigantic. Where coal lies close to the surface, it is more economical to remove the dirt and rock, take out the coal, and then reclaim the land. For this job a whole family of mammoth power shovels, draglines and wheel excavators have been developed.

Surface—or strip—mining shovels are the largest mobile land machines. Each new generation dwarfs its forerunners—it is able to dig deeper and move more earth at lower cost. The biggest machines today are unbelievably huge—18.5 million pounds, towering 220 feet from the coal seams where they work, gobbling 180 cubic yards of earth every 50 seconds and depositing it a city block away. They use enough electricity to power a city of 15,000. Even though such a machine is operated by one man, it cost $10 million or more. The operator rides five stories up to his control room in an elevator that runs through the center pivot. The shovel draws its electric power from an extension cord five inches in diameter.

Shovels work on the floor of the pit; giant draglines sit on the bank above it and remove the overburdened from above low-lying coal seams, taking as much as 120 cubic yards of earth per bite. In some mines, excavating wheels chew up 3,500 cubic yards of earth per hour and dump it on a conveyor belt which drops it two city blocks away.

Once the coal is exposed in surface mines, smaller power shovels scoop it up and load it into huge off-highway trucks for the trip to nearby preparation plants or to shipping points. Even here, the equipment gets larger, almost by the day. Two years ago, a 100-ton truck was considered large. Now a new prototype with power units fore and after carries 240 tons—two or three railroad carloads.

Supplementing underground and surface mining methods is auger mining, a procedure useful in hilly areas where coal seams continue under rising land too thick for economical surface mining. The auger miner twists huge drills likes the carpenter's bits into a hillside coal seam, drawing out the coal to a conveyor which loads it into trucks. Section by section, the drills bore 200 feet into the hillside, Auger mining machines yield high outputs per man-day, and contribute substantially to the industry's ability to recover coal which otherwise could not be mined economically.

The so-called "Pushbutton Miner" sends a remote-control mining machine as much as 800 feet into the side of a hill to take out coal, feeding it to a string of powered conveyor carts which follows the boring device into the hole. The operator, in his air-conditioned cab outside, guides the borer electronically; radar-like signals tell him whether the cutters are straying away from the coal seam and into surrounding rock.

By any method—underground, surface, auger—almost all coal is now mined and handled by machine. Machines of all sorts carry it, crush it, clean it. Efficient modern devices load and unload coal-carrying railroad trucks, barges and ships.

Before being shipped to the consumer, most coal is sized, sorted and cleaned Nearly two-thirds of the coal is cleaned by wet or dry processes, to remove such impurities as rock and pyrite (iron sulfide). In the wet process, coal is floated in water thickened with magnetite or similar materials; the heavier waste material sinks. Air currents replace water in the dry process, and the end result is the same—coal tailored to the customer's order. As it is loaded, the coal may be sprayed with oil, clacium chloride or other agents to keep down the dust or prevent freezing.

Mechanization of coal mining has been carried out at enormous cost to the industry, but the substantial investment is returning dividends to coal producers, miners and consumers. Mining efficiency has increased and

coal prices have been stabilized and even cut while costs of other goods and services were rising. Hazards have been reduced or eliminated; the mines are safer than ever. Mine operators are paying higher wages than ever, too.

Coal is a cornerstone of the American economy in time of peace. In war, the industry has demonstrated its ability to meet added demands for fuel without disrupting service to its normal markets.

Factories can be placed on standby in peacetime, ready to be reopened to meet the needs of expanded defense production. Not so with coal mines for shutdown mines fill with water, machines rust, roofs collapse. Skilled workers move on to other jobs. It is prohibitively costly—in time of national emergency condition.

Coal production can be stepped up substantially—promptly—in time of national emergency. The increased production, however, can come only from mines that are open, equipped, manned and operating. It is vital to the national defense and its economic health that the coal industry maintain a broad production base which can be expanded when needed.

AMERICAN ECONOMY HEAVILY DEPENDENT ON COAL AS MAINSTAY OF FUEL ENERGY

Nothing is more characteristic of 20th Century civilization than the rapidly multiplying use of energy. Modern living demands far more energy per capita than our fathers used, and there are more of us to use it. Total consumption of energy in the United States more than doubled from 1941 to 1965. The cause was not only a growing population but a rising standard of living, including a galaxy of new gadgets that require energy to make and operate.

To meet the rising demand for energy now and in the years ahead, the American economy is relying more and more on a fuel that has been one of its mainstays for more than two centuries: bituminous coal.

Most of the energy we consume come from mineral fuels, and for decades coal was king. As late as 1943, coal produced more than half the energy in the United States. But then changes came—steam locomotives gave way to diesels, and with them vanished one of coal's principal markets. New techniques of laying welded pipeline brought natural gas to nearly every state, and gas took over much of the home heating market and displaced coal in many industrial plants. Imported residual fuel oil sliced into coal's traditional industrial markets on the Atlantic Coast.

By 1961, coal's share of the total energy market had been cut in half. But then coal apparently hit bottom. It has rebounded strongly. In 1965, bituminous coal production climbed to 510 million tons, the highest total since 1951, and accounted for 26.6 percent of U.S. energy output. Natural gas contributed 35.4 percent, petroleum 33 percent, anthracite 0.8 percent, electricity from water power 4.1 percent, and atomic power only 0.1 percent.

These percentages are deceptive, however, for coal does not compete with oil and gas in all energy markets—yet. Vast quantities of oil are converted to gasoline and lubricants, where coal is not presently competitive. However, there is a $10 million research project underway to make gasoline from coal at competitive prices, and the process looks promising. Similarly, considerable amounts of natural gas are consumed in carbon black, which is used in many items from auto tires to floor tile; a comparable product has been made only experimentally from coal. A research program also is underway to convert coal to gas that would be comparable to natural gas; this could have a substantial bearing on coal's part of the total energy market.

In the markets where coal now competes with other forms of energy, bituminous coal produced 32.1 percent of the nation's energy in 1965, compared with 38.5 per cent natural gas, 21.1 per cent for petroleum, 1.7 per cent for natural gas liquid, 1 per cent for atomic power.

By either standard—its share of the total energy market or its share of competitive uses—coal is coming back strongly from its 1961 low, and experts believe it will win a greater share of the market in years ahead.

This confidence is based primarily on the continued growth of the electric utility industry, which now takes almost half the coal industry's output and is expanding rapidly. Not only are the utilities the biggest market for coal, but they rely on coal as the source of energy for 53 per cent of their output. Excluding the minor share of power produced by hydroelectric plants and atomic plants, coal is the fuel used to generate two-thirds of the nation's electricity.

The utilities' dependence on coal is expected to continue and even to increase despite the glamor of atomic power and the competition of other conventional fuels.

The electric utilities rely on coal for many reasons, among them economy and abundant, dependable supply. From the standpoint of abundance, the U.S. Geological Survey estimates coal constitutes 68 per cent of all U.S. conventional fuel reserves. Coal is also economical—since 1962 coal has been the lowest-cost fuel, on a national average, consumed by the utilities. In 1964 the utilities paid an average of 24.6 cents for each million British thermal units (Btu) of heat produced from coal: or equivalent heat from natural gas they paid 25.3 cents, and from oil, 32.6 cents.

Coal has so many attractive features that utilities are turning to it in areas where they have traditionally used little or none. Coal from the Midwest, barged down the Mississippi and across the Gulf of Mexico, now is used to generate power on the west coast of Florida. Long-distance transmission lines will soon carry coal's energy to Los Angeles from mammoth generating plants in the Four Corners area of New Mexico and from southern Nevada.

Atomic energy will undoubtedly become a more serious competitor of coal as a source of electric power. Several electric companies have nuclear power stations under construction which they say will produce power competitive with coal-fired plants. However, one of these plants yet has the operating experience to prove this claim, and all have had the advantage of various forms of government subsidy.

Some experts, including even some officials of the Atomic Energy Commission, fear the proliferation of light-water atomic plants is endangering the nation's atomic birthright in that the lightwater reactors now being installed are using the limited store of low-cost uranium. Until research develops so-called fast breeder reactors, which would convert uranium to new fissionable material and thus conserve the supply of uranium, the operation of multiple atomic plants of the present type cut into the nation's low-cost reserves.

Despite the advance of atomic power, most of the new generating plants announced or under construction by electric utilities will be fired by coal. A survey by the National Coal Policy Conference, Inc., early in 1966 showed more than 75 power plants, burning more than 110 million tons of coal annually, are expected to be built by 1971. Looking further into the future, the Federal Power Commission in its National Power Survey forecast that electric utilities in 1980 would require 500 million tons of coal—they used 243 million in 1965—and that the total 1980 coal market would be 800 million tons.

Coal's hold on the electric utility market has been bolstered by new cost-cutting techniques of moving coal to power plants, or moving the power to market.

Increased efficiency in mining has lowered the cost of coal at mine mouth, and many enormous new power plants burn it right there. They send its energy—coal by wire—to markets often hundreds of miles away through extra-high voltage transmission lines.

Other plants use the new railroading technique of unit trains. These are strings of 100 or more high capacity coal cars, loaded at the mine in a few hours and shuttled directly to big consumers where they are dumped with equal speed and returned for another load. Such efficiency has enabled some railroads to cut coal freight rates by one-third to one-half. One large coal company reported that 80 percent of its 1965 sales to electric utilities moved by unit train.

Improvements in barge transportation—including bigger barges, more powerful towboats and improved inland waterways—are also lowering the delivered cost of coal—not only to the Florida market mentioned earlier, but as many places along the Ohio River and other river arteries.

Truck delivery of coal, particularly within a relatively short radius of the mine, is also cutting costs.

There is another proven way to move coal—by pipeline. Finely-ground coal mixed with water can be pumped to a power plant and burned as a liquid, or dried and pulverized. A 108-mile pipeline operated for five years in Ohio until rail rate reductions caused it to be retired.

The steel industry is the second-ranking consumer of coal. Most of it is premium-quality metallurgical coal which is baked in airtight ovens to make coke for use in blast furnaces which reduce iron ore to pig iron.

Volatile materials given off by white-hot coal in the coking process are captured and used as chemical feed stock for thousands of products. To the layman, coal chemicals are one of the most glamorous aspects of the industry, but they are byproducts. Little or no coal is sold to make chemicals. It is sold to make coke—and in the process it yields the raw material for paint, aspirin, plastics and thousands of other consumer items.

More than 94.6 million tons of coal were converted to coke in 1965, mostly to make steel. (Some coke is used by the chemical industry for other purposes.) The steel industry consumed another 7.6 million tons of coal for process heat and steam. Although new methods and increasing efficiency have reduced the amount of coal required to make a ton of steel, the increasing output of the steel industry is expected to hold it in No. 2 place among coal users. Many of the larger steel companies operate their own "captive" coal mines, but the industry buys large amounts of coal from commercial producers.

Other industries use millions of tons of coal for steam and process heat. The cement industry burned 8.8 million tons of coal in its kilns in 1965; other industries used 83.6 million tons. General industrial use of coal declined for several years under competitive pressure from other fuels, but the industrial market has turned upward and is expected to show modest increases in years ahead.

Coal also heats thousands of homes, apartments and public buildings. Much of this market has been lost to oil and gas, but the decline is slowing. Meanwhile, millions of home owners and building managers who got rid of coal in their basements are buying it again in the form of electric heating, which is mostly generated by coal.

The coal industry has bright prospects in the nation's ravenous appetite for energy, but it also has problems. Cut-rate competition form natural gas and imported residual

fuel oil have hurt coal in prime industrial markets. Nuclear power presents a challenge that must be reckoned with in the years ahead. Operators of strip mines, who produce about one-third of the nation's coal are under severe pressure to meet reclamation standards that are considered by many observers to be so strict as to be unrealistic.

Although coal is sometimes tagged as being a major contributor to air pollution, this generally is not the case. Highly efficient equipment is now available to capture nearly all of the soot and ash from coal combustion power plants. The coal and electric utility industries jointly are spending millions of dollars to find ways to eliminate any potential danger from sulfur oxides.

Meanwhile, the coal industry is aggressively searching for new uses for its product. Prospects appear good that economically competitive gasoline and high-Btu gas can and will be processed from coal before many years have passed.

THREE-QUARTERS OF A BILLION DOLLARS WILL BE U.S. STRIP MINING BENEFITS

Well over three-quarters of a billion dollars will be immediate and direct benefit of strip mining of coal to the public of the United States in *1966*.

First, the industry will spend considerably more than half a billion for wages, salaries, equipment, operating supplies and taxes in the production of some 175,000,000 tons of bituminous coal and anthracite from the small total of some 20,000 acres of land.

Second, the people of the Nation will be the recipients of direct savings of over one-quarter billion, representing what the extra cost of the coal would have been had it been produced by other methods. In total, the direct benefit to the economy is nearly $40,000 per acre of land affected.

These are direct contributions. Other hundreds of millions flow out of moving the coal to destination and making it available for use. And in other directions, strip mining promotes the conservation of a major natural resource by recovering coal that otherwise would be lost—at the same time conserving human values because of the inherent safety advantages of this method of coal production.

But strip coal mining affects land—among other things changing its appearance. It also can affect water if not properly done, as is occasionally the situation. A popular impression is that the land is rendered forever useless, and that water always is unfavorably affected, this in spite of the facts of the situation which include;

Strip mined land can be and is being reclaimed and improved—frequently to a state of higher use value than originally.

Strip mining operations can and are being conducted to protect and improve—water supplies. Reclaimed and improved mined lands produce food and wood and food products, and provide sites for housing and other facilities, including schools, churches, factories and air strips and ports. The list of new uses for mined land increases daily.

Mined lands are particularly suited to the creation of wild life and game-development areas, and, of growing importance, highly useful outdoor recreational facilities, presently in greater and greater demand.

"The Total-Benefit Industry," thus in truth becomes the second name of strip mining.

CONTINUOUS COAL RESEARCH PROMISES BRIGHT FUTURE

Bituminous coal is going places—including some marketplaces where it has never been before—and research is mapping the route.

Coal is still America's solid fuel buy, but research has given it a new flair—the ability to change its shape to suit fashion demands.

You take coal for granted when you flip your electric light switch. You will probably be the same casual coal consumer in the future when you heat and cook with gas produced from coal—and run your car on gasoline extracted from coal.

Coal research promises you other services at home and on the road. The waste flow from your house may end in a sewage treatment plant filled with coal—your white sidewall tires may be strengthened by carbon black derived from coal—and it is a good bet that the brick-and-cinderblock walls of your home and the highways you travel will eventually contain a coal byproduct—fly ash.

Coal is the primary fuel for electric power, of course. But the great flow of coal-derived power from conventional steam-electric generating plants may be augmented soon by wattage from new electricity generating systems—the simple coal-based fuel cell and such tongue-twisters as magnetohydrodynamics and electrogasdynamics. Because of higher efficiency in the conversion of coal heat into electricity, the cost of electricity from coal will be lower.

Current coal research is versatile enough to aim at radically new uses for coal at the same time it promotes better coal use by such traditional big consumers as power generation, steelmaking and industrial processing. Even basic coal industry operations that reached high efficiency years ago are making fresh advances by way of computerized mining and refinements in coal preparation aimed at minimizing air pollution.

The importance of coal to the nation's progress has stimulated research and development on a wide front in industry and government. Focal point of the coal industry's research is Bituminous Coal Research, Inc., an NCA affiliate with a modern laboratory complex at Monroeville, Pa. Individual coal companies also seek coal improvements in the laboratory and field, as do industries with a stake in coal-electric utilities, utilization and mining equipment manufacturers, steelmakers and railroads. Government agencies sponsoring research to assure full use of coal as a natural resource include the U.S. Office of Coal Research, which lets contracts to industrial, university and research groups on a range of coal and coal-product investigations; the U.S. Bureau of Mines, which carries out its own scientific and technical projects: the U.S. Geological Survey; the U.S. Public Health Service; the Tennessee Valley Authority; state geological surveys; and coal-producing states such as Pennsylvania, West Virginia and Alabama.

A cross-section of the broad coverage of research activities shows up at the laboratories of Bituminous Coal Research, Inc. BCR's program spans coal technology from production to use, linking the fact-finding of basic research to development work on exciting new applications for coal.

Under a contract with the Office of Coal Research, BCR has a key role in a program aimed at opening a vast potential market for coal through gasification. The project involves work on process equipment to produce from coal a pipeline-quality gas that can compete in price with natural gas, the proved reserves of which indicate that it is a diminishing natural resource.

BCR is working on its own concept of a two-stage superpressure entrained gasifier.

The gasifier—or coal reactor—contains two stages of gasification in one vessel. In one part of the vessel, the pulverized coal is reacted with steam to produce methane, the principal ingredient of natural gas. The coal that does not react completely—char—is recycled to another part of the vessel and reacted with oxygen to produce heat and additional gas. An advantage of the process is the high yield of methane, which reduces the need for relatively costly oxygen.

Another area of research by BCR is the control of air pollutants resulting from coal combustion. Strict air pollution control regulations pose a threat to coal by severely limiting both the permissible sulfur oxides from coal-fired plant stacks. In an effort to find a solution to the sulfur problem, the coal and electric utility industries jointly are sponsoring an accelerated program of air pollution control research. The coal industry's part of this effort is channeled through BCR. Major elements in the program include:

A stepped-up study by BCR of how sulfur occurs in coals, with analytical help from the shary-eyed microscope techniques of coal petrography. This will advance the promising process BCR has developed for mechanically separating sulfur-bearing pyrites from pulverized coals at electric power plants.

Laboratory study and plant test of the use of additives such as dolomites and other limestones to reduce sulfur oxide emissions from coal burning.

Designing and evaluating a 500-pound-per-hour test furnace for pulverized coal that will enable researchers to check out air pollution control methods under conditions approximating actual power plant experience.

Basic exploratory research on new approaches to the control of sulfur oxides, including careful scrutiny of the work of other scientists throughout the world.

BCR has already developed a laboratory-scale process—known as catalytic gasphase oxidation—to remove sulfur oxides from coal-combustion gases. In the process sulful trioxide is converted to sulfur trioxide and thence to sulfuric acid. Thus, a contaminant is removed from waste gases and turned into a salable product. A process using the same principle has been tested by an Eastern electric utility company and a prototype of commercial-scale equipment is due to be installed at a generating station in Pennsylvania. Also nearing experimental installation is a different process for desulfurizing stack gases, developed by a leading manufacturer of fuel-burning equipment.

Research on other pollutants is also under way.

BCR has done spadework studies under a grant from the U.S. Public Health Service on a newly recognized family of air contaminants—polycyclic aromatic hydrocarbons (PAH). A team of BCR researchers has made laboratory and field studies of the nature and amount of PAH emitted from coal-burning electric utility plants to define the need and approaches to control.

And as a part of the joint coal-utility industry attack on air pollution, BCR is supporting research to determine the concentrations at which pollutants in air become a hazard to people and property. The coal and electric utility industries program includes long-term study by Hazleton Laboratories, Inc., of the physiological effects of various pollutants.

BCR is also attacking another coal-related pollution problem—the contamination of streams by acid waters draining from coal mines. A project for the Pennsylvania Coal Research Board is aimed at removing acid salts from mine drainage. A more effective and lower cost neutralizing agent is being sought.

Acid mine drainage control is an important research goal for many governmental, industry and university research agencies. Pennsylvania's Coal Research Board has taken a mobile treatment plant to a number of acid-drainage sites to test on-the-spot cures and has investigated flash distillation of the acid waters and disposal of them into deep wells. The U.S. Bureau of Mines is conducting laboratory and field studies. A mine safety equipment company is looking into bacterial action to reduce water acidity; many individual coal companies are installing treatment and disposal facilities at their operations.

In addition to the gasification contract with BCR, the Office of Coal Research is pro-

viding a substantial stimulant for other coal research projects it is sponsoring with leading research organizations. Major emphasis is placed on the conversion of coal to gaseous and liquid fuels.

In the gasification area, BCR's other contracts include:

Consolidation Coal Co. is designing a pilot plant to develop the C02 Acceptor Process in which hot, calcined dolomite (a form of limestone) and steam react with lignite in a fluidized bed and produce gas. The spent dolomite is calcined to remove C02 and then reused. The M. W. Kellogg Co. is reacting coal and steam in a molten salt bath that acts as heat carrier and catalyst. In one compartment of the moving melt, gas is produced at elevated pressure; in the other compartment the required heat is generated by burning the coal residue with air. The Institute of Gas Technology, with support from OCR and the American Gas Association, is working on the hydrogasification process in which hydrogen is added to coal to produce gas rich in methane. In all these processes the product gas required purification and methanation to attain pipeline quality.

The U.S. Bureau of Mines is also probing the potential of coal gasification. It is operating a prototype reactor for untreated, highly caking bituminous coal, and at the same time looking for a low-cost method of breaking down its caking properties to allow an increased through-put of coal in a gasifier.

In the field of coal liquefaction, Consolidation Coal Co. has a contract with the Office of Coal Research looking toward the production of high-octane gasoline from coal. The project is now in the pilot-plant stage. The plant being built at Cresap, W. Va., will process 20 to 25 tons of coal daily to produce 50 to 70 barrels of distillated liquids. Cost of gasoline production has been pushed down by project advance to 10.5 to 13 cents per gallon—competitive with gasoline from petroleum in most coal-producing areas of the United States. OCR has allied contract-research projects in the overall coal-conservation field. It has extended work on Project COED by the FMC Corp., which obtained yields of oil, gases (both fuel and hydrogen) and char for fuel use from bituminous coals. The Atlantic Refining Co. has provided bench-scale proof that its Project Seacoke can extract from coal an oil refinery feedstock for the production of gasoline and other liquid fuels. Hydrocarbon Research, Inc., is applying an advanced petroleum-industry technology to convert various coals to liquid products ranging from heavy fuel oils to high-octane gasoline. Iowa State University is working on the electro-processing of coal to produce organic chemicals for the production of plastics and a new supply of hydrogen that will bring an economic spurt to coal-to-gasoline processes.

The Office of Coal Research is considering pilot-plant development of a major contract project that aims at economical production of coal low in both ash and sulfur. Spencer Chemical Co.'s "coal solvation" process indicated a lively market for de-ashed coal as a power plant fuel where atmospheric contamination is a problem—and a bonus use in gas turbines that demand a nonabrasive flow and in the making of carbon electrodes.

Research also is bringing the coal industry new direct product uses. Two potentially big applications lie in sewage treatment and water desalting—both in combination with the pervasive demand for power production. Rand Development Corp. has topped off its experimental work with plant demonstrations of the low-cost efficiency of coal as an absorbent, settling and filtering agent for treatment of domestic sewage and industrial wastes. The coal treatment works as well as the turnover coal in the treatment bed can be used to generate incineration heat or steam for power.

The desalting of water requires substantial heat energy—and in many locations coal is the lowest cost fuel available. OCR has put the M. W. Kellogg Co. to work on an engineering study of the feasibility of linking water desalting and power generating plants in a coal-based complex that could also supply byproduct chemical and fertilizer.

West Virginia University's Coal Research Bureau is building a pilot plant at Morgantown to produce high-quality structural building materials using up to 97 per cent fly ash and bottom ash, formerly a waste from coal burning. The ash is a beneficial, low-cost ingredient in bricks, concrete blocks and paving mixes. Big power stations that burn pulverized coal are turning increasingly to the commercial sale of fly ash—and converting a disposal debit into a byproduct credit.

Meanwhile the U.S. Bureau of Mines found that, in reacting coal with ammonia to make hydrogen cyanide (a staple of the chemical industry), carbon black was almost identical to the commercial product, thermal black, which is used to boost the quality of a host of consumer items including tire sidewalls and floor tile.

Westinghouse Electric Corp. has demonstrated a coal-energized fuel cell that a blue-ribbon panel of scientists honored as one of the "most significant new technical products" of 1965. The simple, compact battery-type unit doubles the efficiency of conventional generators, eliminates cooling-water requirements of normal plants also proved the feasibility of magnetohydrodynamic (MHD) generation using coal as fuel. In the MHD system, a hot ionized and electrically conductive gas is passed through a magnetic field to produce electric current. MHD could improve generating efficiency and at the same time produce nitrogen for fertilizer use. The Office of Coal Research also has a contract dealing with electrogasdynamics—a direct energy conversion system developed by Gourdine Systems, Inc., which turns the heat in gases (that could be produced from coal burning) to high-voltage electricity without use of steam generators, turbines or large amounts of cooling water.

[From the Logan (W. Va.) Banner, July 30, 1966]

POTENTIAL OF FLY ASH MAY BECOME AN ASSET

Until recently, fly ash—which looks like gray powdered talc and is produced in coal combustion—presented an air pollution menace to the coal-burning electric utilities. The companies themselves found ways of collecting this coal by-product through the use of mechanical and electronic devices.

That solved the pollution problem, but created another business expense: Disposal of the fly ash trapped by the collectors. It usually costs from 50 cents to two dollars a ton to get rid of waste fly ash, and the electric utilities in the U.S. are now producing about 20 million tons a year. Not only are some utilities having difficulty in finding a place to dispose of fly ash, but more and more of it is being produced each year.

It's estimated that by 1980 the utilities will have 50 million tons of this waste product to dispose of each year. How successful the utilities are in getting rid of this tremendous amount of ash might well determine how competitive the coal industry will be when competing with the nuclear industry. So says Gerard C. Gambs, assistant to Consol's vice president-chemicals. Although his statement points up the seriousness of the situation, it doesn't mean that he isn't hopeful the industry will meet the challenge. He sees a potential silver lining in the production of this huge volume of fly ash. He thinks it's possible to turn this liability into an asset.

In a paper he read in New York before the Society of Mining Engineers of the American Institute of Mining, Metallurgical and Petroleum Engineers, Mr. Gambs said:

"Coal companies have a chance to turn power plant ash into a hidden opportunity. They can obtain better concrete at a lower price by using one of their own by-products. This in turn will reduce the cost of fuel burned by the utilities, the best customer of the coal industry. The sale of these ashes by the utilities would reduce the cost of burning coal by as much as 1 to 2 cents per million BTU.

"Coal companies can lead the way in this program by starting to specify the use of fly ash concrete, fly ash concrete blocks and similar concrete materials which can use fly ash."

It's been known for a long time that fly ash when used to replace a portion of the cement in a concrete mix will produce stronger, better and more durable concrete. Certainly the Bureau of Reclamation and the U.S. Corps of Engineers are aware of this. For years, they have built dams and other structures with fly ash as a partial replacement for cement.

Consol currently is using fly ash concrete in at least a dozen construction jobs—including mine shafts, foundations and silos. Fly ash from power plants in New Jersey, Pennsylvania, Illinois and Missouri is being used in these products.

"Prior to these construction jobs," Mr. Gambs said, "none of the companies involved had ever used fly ash concrete before. We hopefully expect that since they have been made aware of its many advantages, including its lower cost, that they will continue to use fly ash concrete for all of their concrete work. Thus, the chain reaction could bring about an almost infinite use of fly ash concrete, far greater than the use generated by one individual coal company.

"Fly ash can usually be delivered to the ready mix plants or concrete block plants at a delivered price of about $5 per ton, compared with a delivered price for cement of $20 a ton. Since the fly ash is substituted for cement on a pound for pound basis, it is obvious why fly ash concrete can usually be sold for about $1 per cubic yard less than regular concrete."

Mr. Gambs says that the amount of fly ash used in mixes varies from about 20 per cent by weight or absolute volume of the original cement in the mix to as much as 50 per cent. The higher proportions work well in mass concrete or leaner mixes, where it is important to reduce the hear of hydration.

Truax-Traer Coal Company, division of Consol, is utilizing fly ash concrete in its construction in southern Illinois. Fly ash from the Meramec Station of Union Electric Company, St. Louis was used in the mix. Five sacks of cement plus 100 pounds of fly ash, were used instead of the usual six-sack mix for the concrete. McDowell-Wellman of Cleveland, Ohio, and Roberts and Schaffer of Chicago are the contractors.

Tests conducted by the Pittsburg Testing Laboratory show that after 24 hours fly ash concrete has a higher compressive strength than regular portland cement. Test also pointed up the fact that fly ash concrete continues to grow in strength over the years, a quality that regular concrete lacks.

Fly ash concrete used in Truax-Traer construction projects was mixed by the Chester Concrete Company, which has plants at Sparta, Chester and Red Bud, Ill. This company uses fly ash in more than half a dozen mixes and finds the fly ash good to work with. It's smoother, stronger and cheaper.

Although Consol is pioneering in efforts to find major markets for fly ash it is not alone in this respect. Other companies are trying to find ways to dispose of this waste product profitably.

For example, Con Edison's Astoria, N.Y. generating station is converting fly ash into

a lightweight material for use as an aggregate in concrete and concrete products. This plant is producing pellets ranging from three-eights to three-quarters of an inch in diameter at the rate of 1,000 tons a day. Its product compares favorably in price and is lighter in weight than ordinary crushed stone or gravel. The material has been approved by the Board of Standards and Appeals for building construction in New York City.

The chief advantage of this fly ash aggregate in concrete products is its lighter weight. It gives concrete the same strength as that made with ordinary aggregate but weighs approximately a third less per cubic foot. This makes possible the construction of floor slabs, foundation and column sections of much lighter weight and reduces the amount of reinforcing and structural steel.

A process known as sintering is used at the Astoria plant to produce the fly ash aggregate. Wetted-down fly ash is rotated in bowls 18 feet in diameter to form pellets. They then are baked at 1,300 degrees Fahrenheit on a traveling grate. The pellets are smooth and hard. Commercial operation of the sintering plant represents a major breakthrough after a 25-year program of research aimed at solving a major problem. Disposal of the approximately 150,000 tons of fly ash collected each year at Astoria station alone has cost about $250,000 annually.

The National Coal Association announced earlier in the year that the use of coal by southern California electric companies will open the way for utilization of fly ash in that area's building industry. Vice President Robert E. Lee Hall said that the fly ash will be used in the construction of houses and other buildings, highways and bridges.

It will have the added advantage of keeping costs down, Mr. Hall said, because fly ash can be delivered there for about one-quarter of the price of cement. The Santa Fe Railway is already using fly ash to stabilize its roadbed, he pointed out. In addition, Mr. Hall said, the material has been used to reinforce concrete in construction of several dams in the Rocky Mountain area.

He predicted that the introduction of fly ash to California will begin as soon as the Southern California Edison Company plant in Nevada's Clark county comes into operation. Other use of the material will increase with the completion of a steam-fired generating plant in southern Utah and another in the Four Corners area of New Mexico. Both will produce electricity for the Los Angeles area.

[From the Logan (W. Va.) Banner, July 30, 1966]

FRANCE ORDERS BIG 83,000-TON SUPERCOLLIER

The French government's coal importing agency, Association Technique de l'Importation Charbonniere (ATIC) has ordered an 83,000-ton supercollier, largest in the world, to be used principally for hauling coal from the United States at lower cost. Construction of this and other large ships has led the United States government to begin dredging the requisite channels at Newport News and Norfolk, Va., to a depth of 45 feet.

One of the prime uses of the 83,000-ton supercollier will be to carry steam coal from the United States to electric generating stations in France. ATIC has said France must import as much as 5 million tons of steam coal annually until at least 1975.

France's coal output increased substantially in 1964, but most of the increase represented a recovery from the 1963 miners' strike which lost 5 million tons of production. Coal accounted for 68 per cent of France's solid fuel imports in 1964, with most of it coming from ECSC countries—75 per cent of the ECSC shipments came from West Germany and the rest equally from Belgium and the Netherlands. Of French total imports, 42.4 per cent came from West Germany and 15 percent from the United States.

NETHERLANDS LOOK TO U.S. FOR COAL

The United States supplanted West Germany in 1964 as the largest supplier of coal to the Netherlands, accounting for 35.5 per cent of the import market compared with 33.4 per cent in 1963. Part of the coal imported into the Netherlands is transshipped to other European countries, hence it is not possible to determine how much U.S. coal is actually consumed in the Dutch market. Britain is the third largest supplier of coal to the Netherlands.

Dutch coal exports remained fairly stable from 1960 through 1964, with France the major and steadiest customer.

The overall energy economy of the Netherlands is changing because of the increasing availability of natural gas from newly-discovered Dutch fields and the expanding use of oil.

[From the Logan (W. Va.) Banner, July 30, 1966]

COAL RESERVE HAS UNLIMITED FUEL SUPPLY

One of the two National Coal Association films now being shown around the nation is called "Energy Unlimited"—and for good reason.

So vast are the unmined reserves of coal in the United States that if all other energy sources disappeared, bituminous coal alone could provide the nation with economical and dependable fuel for generations.

Some of our other familiar sources of energy are not so well fixed. Reserves of petroleum and natural gas, for example, are more limited than once believed, at least in terms of present-day costs of discovery, development and production. Nearly all suitable sites for new hydroelectric power facilities in the United States have been developed.

Atomic power, too, may be inhibited in its growth by limitations on reserves. The federal government is currently trying to stimulate exploration for new supplies. The known reserves of low-cost uranium in the United States, if used in the type of reactor now being constructed, would produce electricity equivalent to that produced by about two billion tons of coal—only a minute part of the total energy requirements. New deposits may well be more costly to develop, and the effect on the future economics of atomic power could be significant.

It falls to the coal industry, therefore, to assure the nation and the world of a long-term supply of dependable and economical energy. The industry can provide such an assurance, United States with an enormous supply of coal. All conventional forms of energy we know and use today—electricity, gas, oil, gasoline, residual oil and diesel fuel—can be produced from coal.

In the more than two centuries since coal was first mined commercially near Richmond, Va., the vast storehouse of energy in U.S. coal deposits has barely been tapped. Over this span of time, production and consumption have taken about 32 billion tons—less than 4 per cent—of the nation's known recoverable reserves of coal.

Still underground in 34 of our 50 states, the U.S. Geological Survey reported in 1960, are an estimated 1,660 billion tons, or about 30 per cent of the world's known reserves. By the usual rule that half of the coal in place can be recovered, this gives the nation about 830 billion tons of recoverable coal. At the most recent annual rate of production, this is enough to last more than 1,500 years.

The Department of the Interior believes that the U.S. has a lot more coal, and in a 1963 report estimated total reserves at more than 4 trillion—4,000 billion—tons, more than twice the amount estimated by the Geological Survey three years earlier. At the current production rate, this would be enough to last the nation well beyond the 40th century.

A large part of U.S. reserves are located near utility and industrial markets. Standard means of transportation are easily accessible to move larger quantities of coal quickly and economically to major consumers. Increasing use of extra-high-voltage transmission lines now permits coal's energy to be shipped by wire from large mine-mouth generating plants to distant electric utility load centers. The technical and economic feasibility of transporting coal by pipeline in slurry form—finely ground coal mixed with water—already has been established in commercial practice . . . coal slurry pipelines can be employed when needed in the future to supplement other transportation means.

The Geological Survey's 1960 report compares fossil fuel reserves on the basis of heat content alone, expressed in British thermal units (Btu). Using this standard, coal constitutes about 68 per cent of the nation's recoverable fuel reserves. Petroleum and natural gas together contain about 16 per cent of the available heat, while the remaining 16 per cent is in shale oil, not currently used as a fuel.

The disparity in reserves, heavily weighted by nature in coal's favor, is underscored by the fact that petroleum and natural gas are being recovered and consumed at a rate more than twice that of coal.

Department of the Interior reports indicate that coal deposits lie beneath some 350,000 square miles of land, approximately one-ninth of the total area of the United States. Coal is mined today in 26 of the 34 states in which it is found; the large reserves in the West are gaining importance as a source of low-cost electric power for the booming California market.

It has been estimated that about one quarter of the 830 billion tons of recoverable coal can be mined with present methods at near present cost. This coal—some 200 billion tons of it—is enough for about 400 years at current production rates. Another 30 per cent, nearly 500 years supply, is capable of being mined at costs 25 to 30 per cent over today's production costs. The rest could be mined at costs ranging from 150 to 400 per cent above those of today.

[From the Logan (W. Va.) Banner, July 30, 1966]

U.S. MINER UNMATCHED IN PRODUCTION

Nobody in the world digs as much coal as the average American miner. In 1965 he produced 16.85 tons every day he worked—more than three times the average daily output per man in 1939.

In no other nation can the average coal miner approach this impressive record. In fact, no European country has yet approached the U. S. 1939 average level of 5.25 tons per manday; the nearest, West Germany, was 2.88 tons in 1964.

Caught between rising wage rates and low-priced competitive fuels, the U.S. coal industry after World War II had to mechanize in a hurry to survive, it has taken both courage and money—$250,000 for a modern continuous mining machine, $13 million or more for a gargantuan stripping shovel—but such investments have kept coal competitive with other fuels.

Fewer men are employed in the mines, but labor costs have remained high. American bituminous coal miners are among the world's highest paid industrial workers. Earnings in 1965 averaged $140.23 per week. A new wage contract in 1966 gave top-rated union miners a minimum of $30 a day.

And contributions keep flowing from coal operators to the miners' welfare and retirement fund in the form of 40 cents royalty per ton of coal mined. This fund, largest

of its kind in any industry, has an unexpended balance in cash and other assets, after annual expenditures, exceeding $140 million. Fund expenditures in 1965 were more than $118 million for pensions, hospital and medical care and other benefits.

Better mining operations cost money, and so do improvements in mine safety. The industry places great emphasis on safety, and underscores it by spending millions of dollars annually to make coal mines safer places in which to work. Over the years the bituminous coal industry has made greater progress in improving safety conditions than any other major American industry.

Greater knowledge and understanding of hazardous conditions—developed through research—is the basis of new mining techniques and equipment designed to eliminate dangers. Accident prevention programs, stressed in the training of miners and supervisors, help the coal industry's improving safety record. When accidents do happen, prompt and effective aid is vital.

Mr. PROXMIRE. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. PROXMIRE. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

CONCLUSION OF MORNING BUSINESS

The PRESIDING OFFICER. Is there further morning business? If not, morning business is concluded.

THE UNIFORMED SERVICES SAVINGS DEPOSIT PROGRAM

Mr. PROXMIRE. Mr. President, I ask unanimous consent that the Senate proceed to the consideration of the unfinished business.

The PRESIDING OFFICER. The bill will be stated by title.

The LEGISLATIVE CLERK. A bill (H.R. 14875) to amend section 1035 of title 10, United States Code, and other laws, to authorize members of the uniformed services who are on duty outside the United States or its possessions to deposit their savings with the uniformed service, and for other purposes.

The PRESIDING OFFICER. Is there objection to the present consideration of the bill?

There being no objection, the Senate proceeded to consider the bill, which had been reported from the Committee on Armed Services, with an amendment on page 2, line 8, after the word "the", to strike out "President" and insert "President, not to exceed 10 per centum a year,".

Mr. PROXMIRE. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. PROXMIRE. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

SUPPRESSION OF ACADEMIC FREEDOM IN ARGENTINA

Mr. JAVITS. Mr. President, I want to protest the actions of the Argentine Government in the suppression of academic freedom in its universities and what now seems to be confirmed reports of beatings administered to students and professors, including one American from MIT in Massachusetts who was visiting and teaching there.

Normally, this would be allegedly none of our affair, although it certainly seems to be a very serious invasion of human rights in Argentina which is a member of the United Nations and a subscriber to its charter as well as to the Charter of the Organization of American States. Resolution 26 approved at the Second Special Inter-American Conference last November, it seems to me, makes this matter a subject for inter-American concern.

In view of events in Argentina last Friday I trust the conferees on the foreign aid bill will see the urgent need for retaining my amendment to cut off U.S. economic and military aid to Latin American governments which came into power extra-constitutionally.

According to news reports, the rector and 8 of the 10 deans of the University of Buenos Aires and the rectors and most of the deans of the national universities of La Plata, Cordoba, and Del Literol resigned following the decree issued last Friday by the military government taking control over 8 national universities. The decree ordered all rectors and deans of faculties to pledge their loyalty to the regime within 48 hours.

According to the same news reports, several hours after the issuance of this decree more than a hundred teachers and students were severely beaten by policemen at the University of Buenos Aires. Among those who were severely beaten was Prof. Warren Ambrose, of MIT, who is a visiting professor at the university. I checked with the State Department this morning and I am informed that the news reports on this incident are substantially correct.

It is a well-known fact that there is strong leftwing, including Communist, sentiment in the universities of Latin America and among many of Latin America's intellectuals. It is also well known that police clubs and violence will not stop this but will only tend to justify leftwing attitudes and increase leftwing elements. The answer to such sentiments is rapid progress toward the removal of the basic causes of discontent—poverty, slow economic growth, social injustice—not violence.

One of the most sacred Latin American traditions is the autonomy granted to universities. The fact that the military government is ready to undo such basic traditions of Latin America is hardly evidence that that government will be ready for early return to free elections, and constitutional government. The military government has already outlawed all political parties, closed the country's only magazine of political satire, seized foreign publications, and cracked down on credit union cooperatives.

I hope that the President will make it unequivocally clear as to what took place and the grave view which the United States takes of this incident. I am pleased to note that the Assistant Secretary of State, Lincoln Gordon, called in today the Chargé d'Affaires of Argentina to express U.S. concern over last Friday's developments and to give him an opportunity to provide the full facts as to what happened. The U.S. Chargé d'Affaires in Buenos Aires has also been instructed to call on the Argentine Foreign Office to express our concern and to ask the Foreign Office for the facts on what took place. I have little doubt that many if not all countries of the Americas will condemn these latest acts of the Argentine military regime.

It seems to me that the United States should not jump so quickly to recognize one of these governments. Although I am well aware of the juridical basis for it, the world puts a totally different and unfavorable implication on it, including many Latin American countries.

I hope very much that the administration will recognize the responsibility which our recognition has posed—a responsibility to see to it that this action is not permitted to go by without a stern and sharp protest from the United States.

I take no satisfaction in the fact that this happened so soon after concern was voiced here through amendments—including my own—but I think it is indicative of what we are up against as a result of hasty recognition of military juntas whose antecedents and expectations we know nothing about.

Thus, Mr. President, I hope that three things will be done:

One, that we will make it unequivocally clear to the Argentine Government how much we regret this kind of conduct in Latin America, how damaging it is to the cause of freedom which this military government's head, at least in words, stated he would strive to serve, and how inconsistent it is; that there be an early return to civilian government, with free elections and human and civil rights, as called for by Resolution 26 of the Rio Conference of November 1965.

Second, I hope that we will promptly consult with the other countries of the Americas as to what needs to be done, in order to give assurance to the people of Argentina, who are part of the inter-American system that their liberties will not be taken away in this fashion.

Third, I hope the conferees will now look with favor upon my amendment which was adopted in the Senate, after considerable debate and a record vote on an amendment to make it stronger than I had made it, but which was finally adopted in a pretty reasonable and modest form.

I hope the President of the United States will give serious attention to cutting off or continuing to cut off economic and military aid to this regime so long as it persists in these practices and does not give assurance of free elections, return to civilian government, and application of human and civil rights.

Mr. President, I ask unanimous consent to have printed in the RECORD at

this point an editorial from this morning's New York Times, entitled "Terror in Argentina," an article from today's New York Times, and an article from Sunday's Washington Post on last Friday's events, and I also ask unanimous consent that the text of the amendment approved by the Senate on July 21 and July 27 be printed in the RECORD at this point.

There being no objection, the editorials, articles, and amendment were ordered to be printed in the RECORD, as follows:

[From the New York Times, Aug. 1, 1966]

TERROR IN ARGENTINA

The brutal attack by Argentine police, some of them shouting anti-Semitic and anti-Communist curses, on defenseless university students and professors last weekend inevitably reminds the world of the similar tactics used by Hitler's storm troopers in the 1930's. This flagrant exhibition of police terror gives the lie—if any were needed—to the bland assertion that Argentina's new military rulers have ordered the takeover of the national universities in order to "improve the level of scholarly life." The best elements of Argentine academic life will undoubtedly follow the examples of the rector of the University of Buenos Aires and his colleagues, who have resigned in protest.

This latest outrage fits directly into the bleak pattern of right-wing dictatorial rule that has emerged in Argentina since the coup that ousted President Illia's elected government. The outlawing of all political parties, the closing of the country's only satirical political magazine, the seizure of foreign publications, the crackdown on the credit union cooperatives and the emergence of fascist-minded extremists in important positions all preceded the takeover of the universities and the beatings administered to students and professors.

There can be no question that some of Argentina's most reactionary groups now hold the reins of power in Buenos Aires. Against the background of the old Peronist dictatorship, what has already happened must rouse the gravest fears about the future of free speech, free press and all other free Argentine institutions. So far the new military rulers have shown far more capacity for repression than they have for creative and constructive contributions toward the solution of Argentina's pressing economic, political and social problems. Their incompetence in this area may yet produce their downfall, and it is presumably fear of this outcome that explains their speedy resort to terror against potential dissidents.

RESIGNATIONS SPREAD IN ARGENTINE COLLEGE SEIZURES

(By H. J. Maidenberg)

BUENOS AIRES, July 31.—*Eight of the 10 deans of the University of Buenos Aires* have *resigned* following the military regime's decree taking over the eight national universities.

The two other deans, of the Colleges of Law and Medicine, said today they were studying the *decree* which *ordered all rectors and deans of faculties to pledge their loyalty to the regime within 48 hours or resign.*

The resignation of the rector of the University of Buenos Aires, Hilario Fernandez Long, was made known yesterday. The university here has 75,000 full-time students and is one of the largest in the world.

The rectors of the national universities of La Plata, Cordoba and Del Litoral and most of their deans also resigned. Those of Mendoza and Corrientes indicated that they would remain in office. Reports from Tucuman and Bahia Blanca said the decree was being studied.

It is expected that the military regime will fill the resigned posts with members of the Catholic universities at Santa Fe, Cordoba and the two here. The four Roman Catholic universities in the country were not affected by the decree.

The national universities traditionally have operated autonomously. Their buildings had been off-limits to the police and other government forces.

Late Friday night, a few hours after the new military regime of Lieut. Gen. Juan Carlos Ongania had ordered the seizure of the universities, more than a hundred teachers and students were severely beaten by policemen who entered various University of Buenos Aires schools and classrooms in the capital.

[According to the police, the students and professors had barricaded themselves in the science buildings after the announcement of the Government decree, Reuters reported.]

Horacio Pando, former dean of the faculty of Architecture and City Planning here, told editors of La Prensa:

"About 10 P.M. Friday, the police broke into night classes at our college, shouting obscenities, and began clubbing teachers and students, male and female, many of whom did not know about the decree."

Antonio Pires, former dean of the faculty of Agriculture and Animal Husbandry, declared, "We will never recognize the military intervention in our schools or in our lives."

Prof. Warren Ambrose, who has taught mathematics at the Massachusetts Institute of Technology for 19 years and recently ended a semester at the University of Buenos Aires, was among those beaten.

"The police entered firing tear gas and ordered everyone to face the wall with our hands up," he said "There were about 300 students and 12 teachers attending the night session in the building. As we stood, blinded by the tear gas, against the walls of the classrooms, the police then began hitting us."

Professor Ambrose, 51, a native of Virden, Ill., continued:

"Then, one by one, we were taken out and forced to run between rows of police spaced about 10 feet apart. That is when I got seven or eight wallops and a broken finger. No one resisted. We were all terrified, what with the curses and gas.

"Prof. Carlos Varavsky, director of the new radio observatory in La Plata, received a fractured skull then. The eminent geologist Felix Gonzalez Bonorino, who is about 70, had his head bloodied.

"Those of us on our feet after running the gauntlet were herded into trucks and taken to a police station. They did nothing to us there except ask for papers. I was released at 3 A.M., but few of the others taken with me were freed at that time. At no time was any explanation given us for the police beatings, which is incomprehensible to me."

As word-of-mouth reports circulated yesterday—cautious morning newspapers had merely reported "some disturbances"—President Ongania's press office issued a statement that said:

"We have not closed the national universities. The Government only desires to improve the level of scholarly life by removing certain extremist elements. We all deplore certain events that occurred at various colleges of the national university here Friday night."

The statement added that the national universities were being placed under the control of the Minister of Education. The post has yet to be filled.

Extreme right-wing elements in the new administration have been pressing President Ongania to take control of the schools to prevent their becoming centers of opposition.

Moreover, these groups have been publicly attacking the University of Buenos Aires Press, the largest in the Spanish-speaking world, as the "center of liberal atheistic Communist conspiracy."

[From the Washington Post, July 31, 1966]

ARGENTINE CRACKDOWN HITS SCHOOLS: MIT LECTURER BEATEN BY POLICE IN COLLEGE TAKEOVER

(By Robert Cox)

BUENOS AIRES, July 30.—A Massachusetts Institute of Technology professor was beaten up by Argentine police last night as the month-old military government cracked down on the state universities.

Warren Ambrose, visiting lecturer at the Buenos Aires University faculty of sciences, had been invited to attend a meeting of the faculty board called to discuss a law issued by President Juan Carlos Ongania that placed stated universities under government control.

The law ends the universities' traditional autonomy and had long been expected. What was not expected was the brutality that followed a virtual ultimatum to the rector of the university and the deans of its faculties.

GIVEN 48 HOURS

The ultimatum gave university authorities 48 hours to accept government control through the Ministry of Education or resign. To a man, the authorities of Buenos Aires University resigned, protesting the violation of academic freedom.

Government action against the universities coincided with a law expropriating the funds and premises of the Argentine political parties, which Ongania disbanded after he took over. The law will liquidate the party assets and use them as "national patrimony."

These two steps appeared to observers to mark the first distinct move toward a totalitarian state system. They followed the confiscation of 24 publications deemed "Communist" or "pornographic" in a "morality campaign" launched by Ongania's brother-in-law, Capt. Enrique Green, now commander of the Buenos Aires municipal police, Green said, that "pornography is the seedbed of communism" and set the government on the path of militant Catholicism.

Ambrose, a mathematics professor and an innocent in the world of Argentine politics, was a chance witness and victim of police action which followed the decision of the university authorities to reject Ongania's crackdown.

He said today, "First I heard the sound of bombs. Later I discovered they were tear-gas bombs. The students had locked doors in token defense of the faculty. The police broke down the doors and made us all stand with our hands up and our faces to the walls.

"I saw one professor beaten brutally when he tried to leave.

"Then we were made to run the gantlet between two lines of soldiers about 10 feet apart. They hit us with clubs rifle butts. I was hit about seven times. I managed to avoid some of the blows but I saw a girl beaten severely without provocation. I saw someone else kicked savagely.

"All the time the police were screaming at us. They seemed to have been worked up into hysterical hate. I was really scared. I was held in the police station for about three hours and finally released at four in the morning."

Eight university professors were taken into custody by police. They were all released, but over 150 students are still being held in police headquarters. There were incidents of violence at other faculties and in other national universities, but the largely apolit-

ical science students bore the brunt of police repression.

A government communique today blamed the incidents on activists. Police Chief Mario Fonseca, who directed last night's operation by combat-clad riot police, said that the universities would now be able to operate normally. The "good students" will be able to attend classes as usual, he added.

Press reports said that 20 policemen and 100 students had been injured, but it was impossible to obtain a true picture of the seriousness of the violence.

The severity of the action taken against universities is a reflection of extremist right-wing elements in the government who have long decried Communist infiltration, particularly among the 70,000 students of Buenos Aires University.

A university professor described the police action as the most brutal he has ever seen and said that it was far worse than when then dictator Juan Peron took over the universities in 1945.

The brutality, the ultra-right religious bent shown by Green, and other signs of growing authoritarianism are disturbing many Argentines. Yet there is still no sign of the expected crackdown on the Peronist-dominated labor unions.

Francis Kent of the Los Angeles Times reported earlier on Green's "morality campaign":

Prostitutes have been rounded up by the hundreds, hotels known to admit couples with neither luggage nor marriage documents have been raided, magazines filled with pictures of the female form have disappeared. Even public petting has been outlawed.

Green's campaign has elicited harsh criticism from the press, particularly his suppression of newspapers and periodicals.

Besides the girly magazines, the ban covers such purely political organs as El Retorno, a weekly published by the followers of former dictator Juan Peron, and Marcha, a leftist-oriented weekly printed in neighboring Uruguay.

The humorous weekly, Tia Vicenta, was put on the blacklist following the appearance of a cartoon depicting the heavily mustached Ongania as a walrus.

AMENDMENT

Intended to be proposed by Mr. JAVITS to S. 3584, a bill to amend further the Foreign Assistance Act of 1961, as amended, and for other purposes.

On page 20, between lines 3 and 4, insert a new subsection as follows:

"(g) Section 620, which relates to prohibitions against furnishing assistance, is amended by adding at the end thereof the following new subsection:

"'(p) No assistance shall be furnished under this Act to any member state of the Organization of American States the government of which came into power by the unconstitutional overthrow of a freely elected, constitutional, democratic government which had been acting in accordance with its constitutional mandate, if, in consultation with the members of the Organization of American States, in accordance with applicable resolutions and agreements of the Organization of American States, the President finds that such government does not intend to take appropriate steps, within a reasonable time, for the restoration of constitutional government, the holding of free elecions, and the application of human and civil rights and liberties, until (1) the President is satisfied that such government intends to take such appropriate steps or (2) the President has determined that the furnishing of such assistance is essential to the national interest of the United States, and reports such determination and his reasons therefor to the Senate Committee on Foreign Relations and to the Speaker of the House within 30 days accordingly.'"

THE UNIFORMED SERVICES SAVINGS DEPOSIT PROGRAM

The Senate resumed the consideration of the bill (H.R. 14875) to amend section 1035 of title 10, United States Code, and other laws, to authorize members of the uniformed services who are on duty outside the United States or its possessions to deposit their savings with the uniformed service, and for other purposes.

Mr. SYMINGTON. Mr. President, the bill before the Senate, H.R. 14875, is intended to provide an attractive savings program for members of the uniformed services stationed outside the United States and to reduce the amount by which Department of Defense activities contribute to an adverse balance-of-payments position for the United States.

Under authority first enacted in 1872, enlisted members of the armed services may deposit savings with designated officers of their armed forces and receive interest at the rate of 4 percent per annum.

Today 4 percent is not a very attractive rate of interest.

Participation in this program has declined because of higher interest rates paid by competing savings programs and because of restrictions on the privilege of withdrawal.

Mr. President, this bill replaces the existing deposit program with a new system available to officers and enlisted members of all the uniformed services stationed outside the United States or its possessions.

The interest rates payable on deposits would be determined by the President, but the rate could not exceed 10 percent a year. The committee was informed that the initial rate is likely to be between 6 and 10 percent a year, compounded quarterly. As referred to the committee, the bill contained no maximum on the interest rate that could be prescribed. The committee amendment establishes a maximum rate of 10 percent a year.

A member may not deposit more than his unallotted current pay and allowances, including reenlistment bonuses.

I think this point is important. The maximum balance on which interest may be paid is $10,000. Interest on the deposits would end 90 days after a member's return to the United States or its possessions.

Ordinarily payments of deposits and interest on deposits would not be made while the member is on duty outside the United States or its possessions. The bill contains authority, however, for the Secretaries concerned to prescribe joint regulations permitting repayment of deposits and interest under hardship conditions. The committee believes these regulations should be sufficiently flexible to cover hardships and unexpected financial obligations, but the committee suggests that the Secretaries consider the desirability of prescribing a rate of interest lower than the maximum on deposits that are withdrawn while the member is outside the United States.

The savings deposit program now in effect for persons stationed in the United States would be gradually ended. The bill authorizes a continuation of an interest rate of 4 percent on these deposits until the member's current enlistment terminates, or earlier, as prescribed in joint regulations by the Secretaries concerned.

For a member who is on permanent duty overseas on the date of enactment of the new program, or who reports for duty on or after that date, amounts already on deposit will begin earning interest at the new rate on and after the date of enactment except that amounts in excess of unallotted pay that were deposited between May 4, 1966, and the date of enactment will continue to earn interest at the old rate. This limitation is included to discourage borrowing to make deposits in anticipation of the new higher rate of interest during the period between introduction and enactment of the bill.

To the extent that a more attractive and competitive savings program will cause members of our uniformed services stationed overseas to save instead of to spend, the balance-of-payments deficit of the United States will be reduced.

Mr. CARLSON. Mr. President, will the Senator yield?

Mr. SYMINGTON. I am glad to yield to my friend from Kansas.

Mr. CARLSON. The Senator from Missouri has just stated that ordinarily payments of deposits and interest on deposits will not be made while the member is on duty outside the United States or its possessions.

Does that mean no interest will be accruing or payable to the veteran while he is serving overseas?

Mr. SYMINGTON. The interest accrues, but normally, the serviceman would not be able to withdraw his deposits.

Mr. CARLSON. In other words, he would not be able to use the money until he returned to the States?

Mr. SYMINGTON. As the able Senator will note, I mentioned that the bill provides authority for exceptions in hardship cases.

Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. SYMINGTON. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. YOUNG of Ohio. Mr. President, the pending bill was considered by the Committee on Armed Services, of which I am a member. In my opinion, the bill, in the form that it came to us from the House of Representatives, was a bad bill. It was an unfair proposal. That was my minority view.

The committee has provided one amendment which improves the bill

somewhat. However, I still take a dim view of the entire proposal.

In the form that the bill came to our committee, there was no limit on the interest rate that could be paid on these savings. It is noteworthy also, Mr. President, that the present law applies to enlisted men in the Armed Forces only. It does not apply to officers, as does the pending legislative proposal.

The only testimony before the committee in support of the bill was offered by Assistant Secretary of Defense for Manpower Thomas D. Morris. In making his statement, he deleted some of the remarks from his prepared statement, and it was not absolutely apparent to me, from his oral testimony, whether the bill would apply to officers of our Armed Forces as well as to enlisted men.

I asked him the question before the committee, and he admitted that it was intended to apply to officers as well as enlisted men. One reason why I asked him that question was that in his testimony, he adverted to the fact that General Westmoreland and other high Army officers overseas were enthusiastically in favor of the proposal in the form that it came from the House of Representatives.

He was asked by the distinguished junior Senator from Nevada [Mr. CANNON] whether a limit of 10 percent should be placed upon the interest rate. Bear in mind, Mr. President, the bill provides that whatever interest rate is fixed shall be compounded quarterly. Mr. Morris was not enthusiastic on the subject, but he admitted that officials of the Department of Defense could live with such a provision.

I am happy that the committee has amended the bill to provide that limitation, but I wish to call attention to some further aspects of the proposal of which I take a very dim view.

It is said that the proposal is to provide an attractive savings program for our troops overseas, to replace what Secretary Morris called "the present outmoded soldiers', sailors', and airmen's savings deposit program."

I should like to see the bill amended to make its provisions applicable to enlisted men in our Armed Forces serving overseas only, and not to officers. Congress has been extremely liberal to the officers and men in our Armed Forces. Within the past year, on two occasions, we have increased their pay and allowances; and it is my view that, if anything, we have been more liberal with the officers than with the enlisted men.

I can speak from some personal knowledge on this subject. Years ago, in a time of war, I served as a private in our Armed Forces. Then, in World War II, I served for 37 months as an officer. I can report to anyone concerned that it is much easier and preferable in every respect to serve as an officer than to serve as an enlisted man.

I say that by the enactment of the pending measure, Congress would be abrogating another of its diminishing number of rights and privileges. I have called attention, on the floor of the Senate from time to time, to other occasions when we Senators have abrogated some of our rights and some of our privileges. Among the rights that still remain to us is to fix the compensation of the officers and men of our Armed Forces. But here we would abrogate that right, to the extent that this bill provides for the fixing of interest rates by the Chief Executive as Commander in Chief.

It was stated before the Committee on Armed Services that it was expected that the rate of interest the President would fix would be 7 percent. The bill came to us without any limitation, but it was stated that it was expected the President would fix the rate at that figure.

Compounded quarterly, that would be a pretty good rate of interest. Also, under the bill as amended the President can raise the interest rate to 10 percent, compounded quarterly, without the approval of the Congress.

Here is a very substantial fringe benefit that will accrue principally, in my humble opinion, to the officers rather than to the enlisted men.

It is a matter of regret also, Mr. President, that this matter comes before the Senate at this time. The testimony on the bill was heard by the committee on July 28. During the hearings, after the Assistant Secretary of Defense for Manpower, Mr. Morris, had stated that the average deposit of the enlisted man in the Armed Forces amounted to $200, he was asked whether there were any who had as much as $10,000 on deposit. As I recall it, he said he thought there were, but he could not say how many, but that he would furnish the information to the committee. In that connection, I asked him to please send me a copy of the letter, so that I would have the information.

Unfortunately, I have not received a copy of any letter from him as yet, and I do not believe he has written to the committee, because that was on July 28, and this matter is coming up too soon to afford him an opportunity to do so.

Mr. LAUSCHE. Mr. President, will the Senator yield for an inquiry?

Mr. YOUNG of Ohio. I am happy to yield.

Mr. LAUSCHE. The report says that:

> Under authority first enacted in 1872 enlisted members of the Armed Forces may deposit savings with designated officers of their armed force and receive interest at the rate of 4 percent a year on amounts deposited for 6 months or more.

Who is the banker in this matter? Is the Government the banker?

Mr. YOUNG of Ohio. It is my understanding that the U.S. Treasury is the banker.

Mr. LAUSCHE. Is the present law limited to enlisted men only?

Mr. YOUNG of Ohio. It is limited to enlisted men and noncommissioned officers. The provisions of the law do not provide for officers in our Armed Forces, and I feel that is proper. I regret that this bill includes officers.

Mr. LAUSCHE. The pending bill would eliminate the limitation of the provision to enlisted men and noncommissioned officers and include officers?

Mr. YOUNG of Ohio. The Senator is correct.

Mr. LAUSCHE. The present law places a limit of 4 percent on interest that may be paid, and the amount of interest is increased in the pending bill to not more than 10 percent.

Mr. YOUNG of Ohio. The Senator is correct. The bill as passed in the House of Representatives had no interest limitation. However, the junior Senator from Nevada [Mr. CANNON], who is present in the Chamber, opposed that, and the limitation was fixed at 10 percent. If that amount were to be fixed by the President, it would be compounded quarterly.

Mr. LAUSCHE. The specific rate, within the 10-percent limitation, is to be fixed by the President.

Mr. YOUNG of Ohio. That would be fixed by the President. I do not want to appear to be nit picking, and I do not think I am, but it seems to me that is just another abrogation of the power of Congress to fix the compensation of officers and men in our Armed Forces. This is real compensation. It would be a real fringe benefit to officers. There are very few, if any, GI's who could or would deposit as much as $10,000.

It would be entirely possible for an officer to have an overseas tour of duty for several years and be able to place $10,000 on deposit. That officer would receive whatever amount of interest would be fixed by the President, not to exceed 10 percent. The limitation in the pending bill is occasioned by the farsightedness of the junior Senator from Nevada. Ten percent interest, computed quarterly, is a very handsome rate of interest.

I am fearful that, in a conference with the House, the chairman of the House Committee on Armed Services may prevail. Perhaps the bill will then provide that the sky is the limit.

Much to my surprise, Assistant Secretary of Defense Morris said that the Defense Department could live with the 10-percent limitation. This would make a very attractive savings program indeed for our servicemen when the going rate of interest on savings for civilians is between 4½ and 5½ percent.

I am not impressed by the statement that it would probably affect the balance-of-payments deficit. It would make a real difference to our balance-of-payments problems if we were to eliminate many thousands of our Armed Forces overseas. There are 75,000 men and dependents in France alone. We ought to bring them all home. That would make a difference. In all of Western Europe we have 670,000 enlisted men and officers and their dependents.

Many of our high-ranking officers in Germany are living high on the hog. They are living better than they ever lived in the United States. Furthermore, it is a bad policy to have 400,000 members of our Armed Forces in Europe.

In the administration of President Truman, when there was a bitter cold war raging with the Soviet Union and there was a threat of aggression—which has now ceased to a marked degree—there was reason to have many members of our Armed Forces over there. However, many of our men are now living in West Germany like squaw men with their wives and children. The more

children they have, the greater the allotments that they receive from good old Uncle Sam.

Let us be frank about it. In the event of a sudden emergency, a fine American sergeant in West Germany with a wife and eight children would give first thought in time of peril to the safety of his wife and little children. He would give secondary consideration to his duties as a soldier.

We now have a situation that has entirely changed. We have the power to airlift a division within 48 hours, combat ready, and land them overseas in the field.

I am left cold by any argument made by Assistant Secretary of Defense Morris, or anyone else, that we should pass the pending measures because it will help to end the chronic balance-of-payments problem.

It may be that Congress should provide additional interest on savings of our enlisted men overseas. We should perhaps increase the interest to 6 percent. We must bear in mind that this relates to the unallotted portion of the pay and allowances of our GI's overseas. The savings balance is admitted by Mr. Morris to average around $200 at the present time. He did not give us an exact figure. However, this provision would furnish a stupendous fringe benefit to officers.

What is to prevent an officer from his unalloted pay—and he receives a substantial pay—to pretty quickly accumulate $10,000? This money would be free from any possibility of being garnished by a creditor.

We hope and believe that very few officers in our Armed Forces are dishonest, but if an officer were somewhat dishonest, he could eventually place $10,000 in his account, and it would be free from seizure by any creditor.

The bill specifically provides that the money cannot be attached. It is a handsome fringe benefit. It is obvious to anyone who reads the bill and the committee report that the officers of our Armed Forces would be the chief beneficiaries of this provision.

We all agree that it would be well to keep down the amount that our GI's have to spend in Saigon and elsewhere overseas. Assistant Secretary Morris was asked specifically how much this proposal would cost the Treasury. He said that no estimate could be made, but that any cost would have to be met by appropriations. He also said that it is not contemplated that any savings that accrue on deposit in this program would be put to work to earn bread and butter, as we say, or earn interest. They would be paid into the Treasury of the United States.

Mr. COOPER. Mr. President, will the Senator yield?

Mr. YOUNG of Ohio. I yield.

Mr. COOPER. Do I understand correctly that the bill would not require the members of our Armed Forces to deposit the specific current pay that he would be receiving?

Mr. YOUNG of Ohio. The Senator is correct.

Mr. COOPER. He could deposit any amount——

Mr. YOUNG of Ohio. Any amount from $5 up.

Mr. COOPER. Which does not exceed the current pay.

Mr. YOUNG of Ohio. The Senator is correct.

Mr. COOPER. So that an officer could withdraw a savings account from a commercial bank and deposit it in the U.S. Treasury.

Mr. YOUNG of Ohio. It would seem to me that that could be done to the extent that deposits do not exceed current unalloted pay and and allowances. Furthermore, if the bill were enacted, interest on deposits would continue during the first 90 days after his return to the United States.

I hope I shall be pardoned for having a suspicion on this subject. Many years have elapsed since 1872, and this law has not been amended; and it seems to me that officers of our Armed Forces—probably the higher ranking officers—are really behind this legislation.

Mr. COOPER. I know that it would be difficult to speculate as to the volumes of savings this would induce or persuade, but is there any estimate of the volume of savings that might be affected by this bill?

Mr. YOUNG of Ohio. Assistant Secretary Morris stated that he could not estimate accurately, but it might be $25 million the first year.

Mr. COOPER. Then, the charge to the Government would be the difference between the rate fixed by the President and whatever the cost of the money would be?

Mr. YOUNG of Ohio. The Senator is correct.

Mr. COOPER. Is it not true that Federal Reserve Board regulations limit the interest commercial savings banks may pay now to 4 percent?

Mr. YOUNG of Ohio. I believe it is 4 percent now. It is expected that, if this bill is enacted, the rate for servicemen overseas will be fixed by our President at 7 percent, compounded quarterly. If that is done, it will more than double the present rate.

Mr. COOPER. Was there any estimate made about the favorable effect it would have upon the balance-of-payments deficit?

Mr. YOUNG of Ohio. No. Mr. Morris spent quite a bit of time talking about the effect the enactment of this legislation—with the sky-is-the-limit interest, as it came from the House—would have upon the balance-of-payments deficit. But he was very vague and made no estimate whatever.

Mr. COOPER. It would not have any great effect upon the balance-of-payments deficit, then?

Mr. YOUNG of Ohio. No.

Mr. COOPER. And it would cost the Federal Treasury approximately $2 million, if $25 million of deposits are received. It is really a kind of bonus, is it not?

Mr. YOUNG of Ohio. The Senator is correct. The expression now used by union officials and others is "fringe benefit," but it really is a bonus.

Instead of Congress providing the exact amount of that bonus, that increase in pay, it gives to the President of the United States, the Commander in Chief of our Armed Forces, the power to do so. The junior Senator from Ohio takes a dim view of that situation.

Officials of the Department of Defense say that they can live with 10 percent. Think of that. This is the testimony. They can live with 10 percent. A lot of us would be glad to live with 10 percent.

Mr. COOPER. If it is a kind of bonus or extra pay, it is not paid equally, then, to all members serving in our Armed Forces.

Mr. YOUNG of Ohio. Definitely, it is a bonus. It would give a preference to the man who is sent to West Germany, where he is safe, or the man sent to Japan, where he can enjoy himself in that beautiful country. Both would have a privilege that would not be available to the enlisted man or GI who is stationed any place in this country. The bill has that discriminatory feature.

As for balance of payments, it is impossible for anyone to take that argument seriously, and I need not dwell on that.

It is astonishing, but we have at this time in Western Europe approximately 400,000 men in our Armed Forces, along with their dependents. If Western Europe is regarded as a danger spot, if it is believed that there is any likelihood whatever of aggression from the Soviet Union, then dependents should not be permitted there, and the tour of duty there should be limited to 13 months, the same as it is in Korea at the present time and has been for years.

They talk about this bill helping reduce our balance-of-payments deficit. The balance-of-payments deficit could substantially be reduced if we were to withdraw two or three of our six divisions from West Germany, with all their dependents, along with 100,000 men from France and other countries in Western Europe. Think of what that would do. That would really reduce the balance-of-payments deficit. Furthermore, I believe that such action would evoke cheers from every Member of the Senate. We could withdraw without further delay the 75,000 men of our Armed Forces and their dependents in De Gaulle's France, and bring them home, or send the men where they are needed, in Vietnam or elsewhere. With friends like De Gaulle, this country does not need enemies.

If there is any truth in the claim that the armed forces of the Soviet Union presently menace Western Europe, then dependents, as I have said, should not accompany our servicemen over there. We have proved that we are able to airlift an entire division to Europe within 48 hours and have them in the field, fully equipped, ready for combat, and not encumbered by any dependents.

I feel that the administration is off base in urging the enactment of this bill.

Mr. President, when Stalin was the dictator in the Soviet Union, there was a bitter cold war and the constant threat of aggression. From that time until this hour the Soviet Union has veered considerably away from the aggressive communism of the Stalin era. The threat of nuclear aggression by the Soviet Union

has greatly diminished. The Soviet Union has become a "have" nation. It is no longer a "have not" nation. The Soviet Union recently entered into a major deal with capitalists in Italy to secure thousands of automobiles for the nationals of the Soviet Union. The present rulers of the Soviet Union are no longer rattling their missiles.

What have West Germany, France, and England done for us in our hour of grief in Vietnam? They have done nothing whatever. We spent billions of dollars destroying Japan, and then we spent billions of dollars rebuilding Japan. Now, the Japanese are rioting against the United States. Although Japan has an armed force of 250,000 men, it has not sent a single soldier to help this Nation in Vietnam. West Germany, prospering as never before, has not sent a single soldier to help us in Vietnam.

We should not wet nurse the West Germans any longer. They should protect themselves if they need protection. The truth is that they do not need anything. Let us face it: having all of these men from our Armed Forces and their dependents in Western Europe is only another form of foreign aid. We are aiding those countries that are prospering as they never did before.

Let us not talk about the balance of payments now. Let us talk about the bonuses we are giving our officers. Let us be honest about it. At least, in the Armed Services Committee we have put some sense into the proposal by limiting the interest rate to 10 percent computed quarterly.

I shall not ask for a rollcall vote on final passage, but if there were a rollcall vote I would vote against the bill. I will probably shout "No" and be outvoted by others, but I believe that we should keep bills of this nature under close scrutiny. I believe this is an unnecessary legislative proposal. The real beneficiaries, the real recipients of the huge bonuses resulting from the measure will be the officers of our armed services.

(At this point, Mr. LAUSCHE assumed the chair as Presiding Officer.)

Mr. COOPER. Mr. President, I believe that the Senator from Ohio [Mr. YOUNG] is absolutely correct in his observation. I do not think that the bill accomplishes anything by way of solving balance-of-payment problems. I support always the adequate and fair payment of all our military forces, but in this case, I do not believe this additional payment would reach our military forces generally, but only a small percentage.

Mr. President, the bill before us today provides for a savings program for members of the armed services stationed outside of the United States. Under the terms of the bill as reported by the Armed Services Committee, a member of the Armed Forces serving abroad may deposit up to $10,000 at a U.S. military post and receive interest on such savings deposit at a rate to be established by the President, but in no case to exceed 10 percent compounded quarterly. The committee report recommends an initial interest rate of 7 percent. The chief purpose of this legislation, as stated by the Armed Services Committee in its report, is to reduce the present deficit in our balance of payments.

Under existing regulations promulgated by the Federal Reserve Board, commercial banks are limited in the interest rate they may charge on passbook savings accounts to 4 percent. By setting the interest rate at 7 percent, a rate that may go as high as 10 percent, the Congress will subsidize savings accounts of military personnel deposited—in effect with the U.S. Treasury—at military posts in the United States. Although the stated purpose of this bill—to encourage thrift among our military personnel overseas and to reduce our balance-of-payment deficits—is laudatory, I raise the question as to whether such a program will have any substantial effect on our balance-of-payments deficit. One effect of this legislation, I predict, will be that military personnel will withdraw their funds already on deposit in commercial savings banks located on or near military posts, as well as funds on deposit in commercial savings banks of their hometowns, and redeposit the funds with a military post so as to obtain the substantially higher interest rate.

I note also that the committee report fails to furnish an estimate as to the cost of this program to the Federal Government, and no committee appraisal has been made of the effect such a program would have on our commercial savings accounts.

I think it most unfortunate that the Federal Government should enter into competition with commercial savings banks located on or near military posts, which banks over the years have provided many services to our military personnel and have made longstanding efforts over the years to develop the good will of these people, and countless other banks which have served military personnel in communities throughout the country.

I emphasize that the report and the debate indicate: First, it will place an additional charge on the Federal Treasury represented by the difference between the cost of the money to the Treasury and the interest rate fixed by the President; second, it will have no effect upon the balance-of-payments deficit; and third, it is a kind of bonus which is not spread fairly and evenly among our military personnel.

I shall vote against the bill.

Mr. YOUNG of Ohio. Mr. President, it is very comforting and heartening to me to know that the distinguished Senator from Kentucky [Mr. COOPER] is in accord with my views on this legislative proposal.

Mr. MUSKIE. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. SYMINGTON. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

The question is on agreeing to the committee amendment.

The amendment was agreed to.

The PRESIDING OFFICER. The bill is open to further amendment. If there be no further amendment to be proposed, the question is on the engrossment of the amendment and third reading of the bill.

The bill (H.R. 14875) was ordered to a third reading, was read the third time, and passed.

MESSAGE FROM THE HOUSE

A message from the House of Representatives, by Mr. Hackney, one of its reading clerks, announced that the House had passed, without amendment, the following bills of the Senate:

S. 2412. An act to terminate use restrictions on certain real property previously conveyed to the city of Kodiak, Alaska, by the United States;

S. 3249. An act to consent to the interstate compact defining the boundary between the States of Arizona and California; and

S. 3498. An act to facilitate the carrying out of the obligations of the United States under the Convention on the Settlement of Investment Disputed Between States and Nationals of Other States, signed on August 27, 1965, and for other purposes.

The message also announced that the House insisted upon its amendment to the bill (S. 3034) to authorize the Secretary of the Interior to engage in feasibility investigations of certain water resource development proposals, disagreed to by the Senate; agreed to the conference asked by the Senate on the disagreeing votes of the two Houses thereon, and that Mr. ASPINALL, Mr. ROGERS of Texas, Mr. O'BRIEN of New York, Mr. SAYLOR, and Mr. HOSMER were appointed managers on the part of the House at the conference.

The message further announced that the House disagreed to the amendment of the Senate to the bill (H.R. 15750) to amend further the Foreign Assistance Act of 1961, as amended, and for other purposes; agreed to the conference asked by the Senate on the disagreeing votes of the two Houses thereon, and that Mr. MORGAN, Mr. ZABLOCKI, Mrs. KELLY of New York, Mr. HAYS, Mr. ADAIR, Mr. MAILLIARD, and Mr. FRELINGHUYSEN were appointed managers on the part of the House at the conference.

Mr. SMATHERS. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

RECESS SUBJECT TO CALL OF THE CHAIR

Mr. MANSFIELD. Mr. President, it is my understanding that the Secretary of Labor is now being questioned by the last one or two Senators of the Committee on Labor and Public Welfare who have not yet done so.

It is my further understanding that the committee will shortly be going to lunch. Whether anything will be forthcoming from that committee this afternoon, I do not know. But in order that the Senate may be on notice and be prepared to stay in session until a reasonable hour, if need be, I ask unanimous consent that the Senate stand in recess subject to the call of the Chair.

The PRESIDING OFFICER. Without objection, it is so ordered.

(Thereupon, at 2 o'clock and 23 minutes p.m., the Senate took a recess subject to the call of the Chair.)

At 3 o'clock and 53 minutes p. m., the Senate reassembled, when called to order by the Presiding Officer (Mr. McCARTHY in the chair).

AUTHORITY FOR COMMITTEES TO FILE REPORTS

Mr. MANSFIELD. Mr. President, I ask unanimous consent that, during the adjournment of the Senate, all committees be authorized to file reports, including minority or individual views.

The PRESIDING OFFICER. Without objection, it is so ordered.

ADJOURNMENT

Mr. MANSFIELD. Mr. President, in view of the fact that the Committee on Labor and Public Welfare is going back into session at 4:15 p.m., and since it appears that a discussion in committee may be going on for some time, I think it is in the best interest of all that the Senate adjourn until 12 o'clock noon tomorrow, and I so move.

The motion was agreed to; and (at 3 o'clock and 54 minutes p. m.) the Senate adjourned until tomorrow, Tuesday, August 2, 1966, at 12 o'clock meridian.

NOMINATIONS

Executive nominations received by the Senate August 1, 1966:

DIPLOMATIC SERVICE

J. Robert Schaetzel, of Illinois, to be the Representative of the United States of America to the European Communities, with the rank and status of Ambassador Extraordinary and Plenipotentiary.

OFFICE OF SCIENCE AND TECHNOLOGY

Ivan L. Bennett, Jr., of Maryland, to be Deputy Director of the Office of Science and Technology, vice Colin Munro MacLeod.

ATOMIC ENERGY COMMISSION

Carl Walske, of New Mexico, to be Chairman of the Military Liaison Committee to the Atomic Energy Commission, vice William Jack Howard, resigned.

HOUSE OF REPRESENTATIVES

MONDAY, AUGUST 1, 1966

The House met at 12 o'clock noon.

Rev. Father Frederic P. Gehring, C.M., national chaplain, Catholic War Veterans, Washington, D.C., offered the following prayer:

Almighty God, who in the beginning did command the light to shine out of darkness, and did go before Your people in a pillar of fire, let Your word be a lamp to our feet and a light to our path. Illumine our minds and kindle our hearts, that we may see Your truth and run in the way of Your commandments. Before us lie grave problems that perplex the wisest of us: problems that concern the moral and social welfare of our Nation. Who are we, C Lord, that as of ourselves we should presume to know what to do or think? Hear us, O Lord, and send forth Your light and Your truth. Send them especially, we beseech You, into the hearts and minds of those who are appointed to be our leaders: those who legislate and rule and judge, so that by the help of their wise and just ministrations, You may redeem us to Yourself, and our children to walk in Your paths. Through Christ our Lord. Amen.

THE JOURNAL

The Journal of the proceedings of Friday, July 30, 1966, was read and approved.

MESSAGE FROM THE SENATE

A message from the Senate by Mr. Arrington, one of its clerks, announced that the Senate had passed without amendment bills of the House of the following titles:

H.R. 3013. An act to amend title 10, United States Code, to provide gold star lapel buttons for the next of kin of members of the Armed Forces who lost or lose their lives in war or as a result of cold war incidents;

H.R. 11980. An act to authorize the Secretary of the Army to donate two obsolete German weapons to the Federal Republic of Germany;

H.R. 12031. An act to authorize the appointment of Col. William W. Watkin, Jr., professor, of the United States Military Academy, in the grade of lieutenant colonel, Regular Army, and for other purposes; and

H.R. 13374. An act to amend title 10, United States Code, to authorize the award of trophies for the recognition of special accomplishments related to the Armed Forces, and for other purposes.

The message also announced that the Senate had passed, with amendments in which the concurrence of the House is requested, a bill of the House of the following title:

H.R. 4665. An act relating to the income tax treatment of exploration expenditures in the case of mining.

The message also announced that the Senate had passed bills of the following titles, in which the concurrence of the House is requested:

S. 2097. An act to provide effective procedures for the enforcement of the establishment and free exercise clauses of the first amendment to the Constitution; and

S. 3148. An act to provide for the conveyance of all right, title, and interest of the United States reserved or retained in certain lands heretofore conveyed to the city of El Paso, Texas.

The message also announced that the Vice President, pursuant to Public Law 689, 84th Congress, appointed the following Members on the part of the Senate to the North Atlantic Treaty Organization Parliamentary Conference, to be held in Paris, France, November 14 to 19, 1966: Mr. SPARKMAN, Mr. PASTORE, Mr. JACKSON, Mr. CANNON, Mr. RIBICOFF, Mr. HICKENLOOPER, Mr. MUNDT, Mr. JAVITS, Mr. PROUTY, Mr. BAYH (alternate), and Mr. KUCHEL (alternate).

AMENDING FURTHER THE FOREIGN ASSISTANCE ACT OF 1961

Mr. MORGAN. Mr. Speaker, I ask unanimous consent to take from the Speaker's desk the bill (H.R. 15750) to amend further the Foreign Assistance Act of 1961, as amended, and for other purposes, with a Senate amendment thereto, disagree to the Senate amendment and agree to the conference asked by the Senate.

The SPEAKER. Is there objection to the request of the gentleman from Pennsylvania?

Mr. GERALD R. FORD. Mr. Speaker, reserving the right to object, and I do not intend to object, which of the two bills on the other side of the Capitol are you going to conference on?

Mr. MORGAN. We are going to conference on the House bill.

Mr. GERALD R. FORD. You are going to conference on the House bill?

Mr. MORGAN. That is correct.

Mr. GERALD R. FORD. Are there two versions of this proposed legislation on the other side of the Capitol?

Mr. MORGAN. There are two versions on the other side of the Capitol but the only bill in conference will be the House bill.

Mr. GERALD R. FORD. Mr. Speaker, I withdraw my reservation of objection.

The SPEAKER. Is there objection to the request of the gentleman from Pennsylvania? The Chair hears none, and appoints the following conferees: Messrs. MORGAN and ZABLOCKI, Mrs. KELLY, Messrs. HAYS, ADAIR, MAILLIARD, and FRELINGHUYSEN.

PERMISSION FOR COMMITTEE ON RULES TO FILE CERTAIN REPORTS

Mr. BOLLING. Mr. Speaker, I ask unanimous consent that the Committee on Rules may have until midnight tonight to file certain privileged reports.

The SPEAKER. Without objection, it is so ordered.

There was no objection.

THE AIRLINE STRIKE

Mr. SIKES. Mr. Speaker, I ask unanimous consent to address the House for 1 minute and to revise and extend my remarks.

The SPEAKER. Is there objection to the request of the gentleman from Florida?

There was no objection.

Mr. SIKES. Mr. Speaker, the gauntlet has been flung in the face of the American people by the striking airlines workers. By rejecting the results of the agreement reached Friday night the machinists now imperil the national interest and action must be taken. Congress has moved with restraint hoping that the